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## ORIGINAL LECTURES.

### PLASTER-OF-PARIS DRESSING IN INJURY TO THE ELBOW-JOINT.

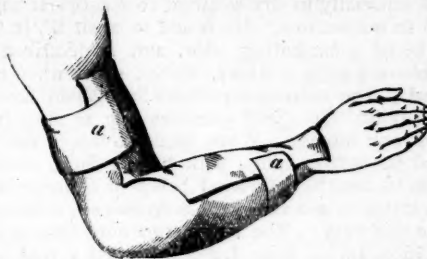
*Abstract of a Clinical Lecture delivered*

BY PROF. JAMES L. LITTLE, M.D.,

IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

GENTLEMEN: The patient that I now show you is a boy of about ten years of age, brought here by Dr. Griswold, of this city. He sustained an injury to his elbow, which has resulted in an inflammation of the joint of a subacute character. Dr. Griswold tells me that when he saw the case, some four weeks ago, he detected marked fluctuation upon the outer side of the joint. With the aspirator he removed about two ounces of pus. Probably you remember that I presented this case to you a week ago. I then detected fluctuation over the seat of the former abscess, and naturally concluded that it was refilling. At that time, as you will remember, I applied a plaster-of-Paris splint to the arm and forearm without altering its position, the idea being to keep the joint at rest. I told you that I would come to-day prepared to anesthetize the patient and bring his arm into a flexed position, a little less than a right angle, so that if ankylosis resulted the limb would be in a good position for use. It was also my intention, as I told you at that time, to open the abscess, make a thorough examination, under strict antiseptic precautions, and ascertain whether the abscess was connected with the joint, introducing a drainage-tube, if necessary, and dressing the part according to Lister. But you see that the general condition of the patient is very much improved. Upon examination I find that the swelling around the elbow has entirely disappeared, so that no fluctuation can now be detected. No operative interference, therefore, will be necessary, so far as the abscess is concerned. I wish, however, to put the arm in such a position that, should the joint become stiffened, the limb will be of some service to the patient. To this end the boy has been thoroughly anesthetized, and I now forcibly flex the arm to a little less than a right angle, so that the hand touches the mouth. While the limb is held in this position I apply a plaster-of-Paris splint to the anterior portion of the arm and forearm. This, as you will see, is made of two thicknesses of bleached cotton flannel, wide enough to enclose about one-half of the circumference of the limb. The flannel is thoroughly saturated in a mixture of plaster of Paris and water. A strip of the same material, about an inch and a half in width, saturated in the plaster of Paris, is applied around the arm, just below the upper extremity of the splint, and another similar band above the wrist, to retain the anterior splint in position. While the plaster is still wet, and with the arm held in the desired position by my assistant, Dr. Powell, I apply an ordinary roller bandage tightly from the hand to the shoulder, moulding the flannel to the limb. Having accomplished this, the limb is held in the position in which we have placed it until the plaster is set. This takes but a short time. The plaster is now hard, and I remove the bandage, and, as you see, I have a beautiful plaster-of-Paris anterior splint, which is unyielding, and will hold the arm in its present position. At the same time the dorsal surface of the joint, from

the external to the internal condyle, is uncovered, so that its condition can be observed from time to time. A dry cotton roller is now applied from the hand to the shoulder, and the dressing is complete, and its appearance is shown in the following figure.



With plaster applied in this way you can make an angular splint to cover any part of the forearm or arm. This dressing has one advantage over all others, inasmuch as after its application the limb can at once be placed in the desired position and held there until the dressing becomes hard. Another advantage is that it can be applied directly to the skin without any irritation resulting. If hairs exist upon the limb, the surface should be smeared with oil or vaseline before applying the splint.

The length of time that I shall allow this dressing to remain upon the patient will depend upon the progress of the case. If the inflammation subsides rapidly, and the pain disappears, it can be removed in a short time and passive motion begun.

## ORIGINAL ARTICLES.

### A PARTIAL STUDY OF THE POISON OF HELODERMA SUSPECTUM (COPE)—THE GILA MONSTER.

BY S. WEIR MITCHELL, M.D., AND  
EDWARD T. REICHERT, M.D.,

OF PHILADELPHIA.

(Read before the College of Physicians of Philadelphia, February 7, 1883.)

FOR some years past it has been known to naturalists that the Gila lizard of Arizona and Sonora was endowed with anterior deciduous grooved teeth, which communicated by ducts with large glands within the angle of the lower jaw. These arrangements naturally suggested a certain power of poisoning, as to which, however, the most conflicting accounts have reached, and continue to reach us from Arizona. In many houses the sluggish creature shown to you was a pet of children, and seems to have been averse to using his weapons of offence. The occasional accidents from his bite were variously explained away; but still, among the Indians and some settlers, he enjoyed an evil reputation. Only within a week we have had two letters from Arizona, the one describing him as "more peaceful and harmless than a young missionary," and

the other as being "worse than a whole apothecary shop." Nevertheless, both in France, and of late in London, specimens have bitten and promptly killed small animals.

It is worth while to mention more distinctly some of the evidence for and against the poisoning power of *Heloderma*. His bad name in Mexico is mentioned by Bocourt and Dumerei, but Sumichrast is more full in his statements.

This curious lizard is, he says, slow and embarrassed in his movements, and hides in the daylight, and especially in dry weather, to emerge at night and in wet seasons. He is said to smell ill, in fact to be of a nauseating odor, and is described as slobbering forth a sticky, whitish saliva when irritated. The natives, says Sumichrast, hold him in the utmost terror, and consider him as more fatal than any serpent. When made to bite a fowl, it died in twelve hours, with bloody fluid exuding from its mouth, the wound being of a purple tint. A cat bitten was very ill, but recovered, remaining thin and weak. The *Heloderma horridum* sent to London, to Sir John Lubbock, killed a frog in a few minutes, and a guinea-pig in three minutes.

Many years ago Dr. Irwin,<sup>1</sup> U. S. A., experimented in New Mexico with the Gila monster, and concluded it to be harmless, while Mr. Horan, Superintendent of the National Museum, says he himself has been several times bitten without serious results. The following statement of Dr. Shufeldt adds a further difficulty in making up our estimate of the powers of *Heloderma*. The lizard he speaks of is the one we now exhibit. (The lizard was now shown.) It was sent to the Smithsonian by A. T. Burr, U. S. A., and is the *H. suspectum* of Cope.

On the 18th inst., in the company of Professor Gill of the Smithsonian Institution, I examined for the first time Dr. Burr's specimen, then in a cage in the herpetological room. It was in capital health, and at first I handled it with great care, holding it in my left hand, examining special parts with my right. A close of this examination I was about to return the fellow to his temporary quarters, when my left hand slipped slightly, and the now highly indignant and irritated *Heloderma* made a dart forward and seized my right thumb in his mouth, inflicting a severe lacerated wound, sinking the teeth in his upper maxilla to the very bone. He loosed his hold immediately and I replaced him in his cage, with far greater haste, perhaps, than I removed him from it.

By suction with my mouth, I drew not a little blood from the wound, but the bleeding soon ceased entirely, to be followed in a few moments by very severe shooting pains up my arm and down the corresponding side. The severity of these pains was so unexpected that, added to the nervous shock already experienced, no doubt, and a rapid swelling of the parts that now set in, caused me to become so faint as to fall, and Dr. Gill's study was reached with no little difficulty. The action of the skin was greatly increased, and the perspiration flowed profusely. A small quantity of whiskey was administered. This is about a fair statement of the immediate symptoms; the same night the pain allowed of no rest, although the hand was kept in ice and laudanum: but the swelling was confined to this member alone, not passing beyond the wrist. Next

morning this was considerably reduced, and further reduction was assisted by the use of a lead-water wash.

In a few days the wound healed kindly, and in all probability will leave no scar; all other symptoms subsided without treatment, beyond the wearing for forty-eight hours so much of a kid glove as covered the parts involved.

After the bite our specimen was dull and sluggish, simulating the torpidity of the venomous serpent after it has inflicted its deadly wound, but it soon resumed its usual action and appearance, crawling in rather an awkward manner about its cage.—*American Naturalist*, November, 1882.

The specimen shown has eaten once since we have had him, but the Gila monster is said to live on bird eggs, and to eat daily of like food while in captivity.

The sluggish habits ascribed to *Heloderma* in general have been noticed in our specimen; but it is clear from Dr. Shufeldt's accident that, like the habitually inert *Crotalidæ*, this creature is capable of sudden, and therefore unexpected, agility in attack.

As we shall have sent to us in the spring a number of *Helodermas*, we shall then be able to complete the study of the poison of these interesting lizards—the only members of the family of lizards as yet known to be poisonous. The subject is, however, too full of interest to delay the publication of our preliminary study, since, as far as it has gone, it is perfectly definite and satisfactory.

The Gila monster inhabits the dry hillsides of Arizona, and is said to reach the length of three feet. The specimen we exhibit is about fourteen inches long, and from war or accident had when he reached us lost all but two of his teeth, and as yet no new ones have taken their places. Without them he would certainly be as harmless as a rattlesnake deprived of his fangs; and as these teeth are very small, and easily removed, their absence may account for some of the instances in which the lizard has bitten and done no grave harm.

Experiments made in the usual vague way, by allowing the lizard to bite animals, are obviously untrustworthy; so that it was thought best to use the saliva in known quantities. The fluid was obtained by provoking the animal to bite on a saucer-edge—which it was most indisposed to do. When once it had seized the saucer it was hard to pull it away, so powerful was the grip of the lizard's jaws. After a moment, a thin fluid like saliva dripped in small quantities from the lower jaw. It was slightly tinted with blood, due to the violence of the bite, and it had a faint and not unpleasantly aromatic odor. The secretion thus collected from the mouth was distinctly alkaline, in contrast to serpent venoms, which are all alike acid.

*Experiment I.*—About four minims were diluted with one-half cubic centimetre of water, and thrown into the breast muscles of a large, strong pigeon, at

4.23 P. M. In three minutes the pigeon was rocking on its feet, and walking unsteadily. At the same time the respiration became rapid and short, and at the fifth minute feeble. At the sixth minute the bird fell in convulsions, with dilated pupils, and was dead before the end of the seventh minute.

<sup>1</sup> Am. Naturalist, November, 1882.

The first contrast to the effects of venom was shown when the wound made by the hypodermic needle was examined. There was not the least trace of local action, such as is so characteristic of the bite of serpents, and especially of the *Crotalidæ*.

The muscles and nerves responded perfectly to weak induced currents, and to mechanical stimuli.

The heart was arrested in the fullest diastole, and was full of firm black clots. The intestines looked congested. The spine was not examined.

*Experiment II.*—In the following experiment a full-grown etherized rabbit was used, and the left carotid being connected with the Kymographion, one-sixth of a grain of dry *Heloderma* venom dissolved in one cc. of distilled water, was injected into the external jugular vein.

#### Action on the Arterial Pressure.

	TIME. min. sec.	PRESSURE. mm.	REMARKS.
Normal,		110	
Injection,	.0		
	.3	100	
	.5	80	
	.10	60	
	.15	70	
	.20	66	
	.30	50	
	1.	50	
	2.	44	
	3.	32	
	4.	26	
	5.	20	
	8.30		
	10.		
	10.30		
	11.10		
	11.30		
	12.		Convulsive move- ments.
	12.30		The pressure grad- ually declining to 7 mm., when the animal expired.
	14.30		
	15.		
	16.		
	17.		
	18.		
	19. Death.		

#### Action on the Pulse.

	TIME. min. sec.	PULSE. in 10 sec.	PULSE CURVES. mm.	REMARKS.
Normal,		57	7	
Injection,	.0			
	.15	57	1.0	
	.30	54	1.2	
	1.	51	1.0	
	2.	53	.8	
	3.	56	.7	
	4.	61	.6	
	5.	61	.5	
	8.30	56	.4	Convulsive movements.
	10.	47	.5	
	10.30	27	1.6	
	11.10	31	1.0	
	11.30	19	1.2	
	12.00	22	.8	
	12.30	28	.3	
	14.30	63	.2	
	15.	58	.3	
	16.	63	.2	Convulsive movements.
	17.			
	18.			
	19. Death.			

*Experiment III.*—The following experiment was made on a full-grown rabbit in which the pneumogastric nerves were cut, and in which the same dose and method of injection were used; the object being to determine if the above nerves were in any way con-

nected with the changes in the circulation observed in the preceding experiments.

#### Action on the Arterial Pressure.

	TIME. min. sec.	PRESSURE. mm.	REMARKS.
Normal,		80	
Injection,	.0		
	.8	66	
	.15	52	
	.30	56	Convulsive movements.
	.40	60	" " "
	.50	42	" " " stopped.
	1.	34	" " "
	.10	28	" " "
	.30	24	" " "
	.35		30 Violent convulsions, followed by death in 30 seconds. During these convulsions the canula became detached from the artery.

Death in 1 min. 35 sec.

#### Action on the Pulse.

	TIME. min. sec.	PULSE. in 10 sec.	PULSE CURVE. mm.	REMARKS.
Normal,		46		
Injection,	.0		.6	During the last half of the first minute, and after, the tracing was so irregular on account of the convulsive movements that the pulse could not accurately be counted.
	.15	47	.8	
	.30	44	1.0	
	1.00	52	.3	
	1.30			Violent convulsions.
	1.35			

The animal died in convulsions with dilated pupils.

The results were identical with those obtained when the pneumogastrics were entire, so that the effect on the heart is direct, and not by inhibition through the pneumogastrics.

The results of the autopsy in both of the above experiments are identical, and may be summed up as follows:

*Autopsy, made immediately after death.*—Heart arrested in diastole; heart does not react to induction currents; muscles everywhere respond to electric stimulation; motor nerves intact; cord un-irritable, and will not respond to the strongest current produced by one large gravity cell, with Du Bois Reymond's induction coil; bowels still irritable; peristaltic movements occur spontaneously; the intestines are natural in color, as are all other organs. After five minutes the heart began to contract, and was finally found in a systolic condition. The interior of the organ was full of black clots, especially the auricles, the left ventricle containing but a very small clot.

In order still further to determine the effect on the heart, the following experiments were made:

#### Experiment IV.—

hrs. min.	
7.33	Pithed frog and exposed the heart.
.52	Heart beats 21 in 30 seconds.
.52½	Placed a small portion of dried venom of <i>Heloderma</i> on the heart.
.56	Heart beats 20 in 30 seconds.
8.05	" " 19 " "
.18	" " 18 " "
.30	" " 15 " "
.43	" " 14 " "
.55	" " 10 " "
9.30	" " ceased.



*Experiment V.—*

hrs. min.	
8.05	Took two "cut-out" hearts of frogs, and placed them in a normal salt solution in separate vessels, just sufficient liquid being used to cover the hearts. On one heart was placed a small quantity of dried venom.
.27	The poisoned heart beats more feebly than the other.
.30	" " " " still more feebly than the other, which is yet firm.
.45	The poisoned heart stopped beating, the other beats firmly.
.55	The poisoned heart stopped beating, the other beats firmly but slower.

*Experiment VI.—*

3.45	Exposed the hearts of two pithed frogs.
4.00	Placed on one some dried venom.
.30	The poisoned heart beats are decidedly feebler than the other.
.50	The poisoned heart beats more feebly; the unpoisoned heart beats firmly and apparently in a normal manner.
6.00	The poisoned heart beats very feebly and does not fill with blood. The normal heart beats firmly, and fills well with blood at each beat, making a striking contrast with the poisoned heart.

We may conclude that—

The poison of *Heloderma* causes no local injury.

That it arrests the heart in diastole, and that the organ afterwards contracts slowly—possibly in rapid rigor mortis.

That the cardiac muscle loses its irritability to stimuli at the time it ceases to beat.

That the other muscles and the nerves respond readily to irritants.

That the spinal cord has its power annihilated abruptly, and refuses to respond to the most powerful electrical currents.

This interesting and virulent heart poison contrasts strongly with the venoms of serpents, since they give rise to local hemorrhages, and cause death chiefly through failure of the respiration, and not by the heart, unless given in overwhelming doses.

They lower muscle and nerve reactions, especially those of the respiratory apparatus, but do not, as a rule, cause extreme and abrupt loss of spinal power.

Finally, they give rise to a wide range of secondary pathological appearances, which are absent from *Heloderma* poisoning.

There remains on our minds no doubt as to the fact that the fluid which drips from the mouth of *Heloderma* when it bites is a very active poison. The present study is, however, limited in range, and we cannot yet feel sure that the fluid in question comes from the glands now presumed from their relation to the teeth to be poisonous.

The briefest examination of the lizard's anatomy makes clear why it has been with reason suspected to be poisonous, and why it poisons with so much difficulty. Unless the teeth are entire, the poison abundant, and the teeth buried in the bitten flesh so as to force it down into contact with the ducts where they open at the crown of the teeth, it is hard to see how even a drop of poison could be forced into the wounds. Yet it is certain that small animals may die from the bite, and this may be due to the extraordinary activity of the poison, and to the lizard's habit of tenaciously holding fast to what

it bites, so as to allow time for a certain amount of absorption.

It is plain enough that a lizard as small as the one exhibited would be very unlikely to inflict a wound fatal to man; but it is possible that the larger animal—and it is said to reach a length of three feet—might prove a more efficient poisoner.

We are unwilling to drop the subject without a few words as to the nature of this poison.

The recent researches of Dr. Sternberg and Prof. Gautier have shown that human saliva may kill a rabbit in twenty-four hours, according to the former observer, and a pigeon in a few hours, he does not say how many, according to the latter, if a quantity of saliva have been concentrated by heat and so used. Professor Gautier thinks the saliva and all venoms owe, at least, a part of their power to normal ptomaines or animal alkaloids, the products of putrefactive processes, and recalls to us the fact that most secretions are measurably poisonous.

The answer to these views we shall have to consider elsewhere, and at length, but it will be sufficient here to say that there is no resemblance between the symptoms caused by the known ptomaines and those produced by any of the venoms. When it was shown that healthy human saliva was competent to kill, it was natural enough to leap to the conclusion that the venoms were merely concentrated salivas. The analogy ends with the fact that both may cause death, but the one may kill in twenty seconds, and the other requires, at the least, many hours, whilst also it seems, as regards saliva, to be, in some degree, a question of the toxic activity of certain individuals, not all being so uncomfortably endowed as Dr. Sternberg himself.

## A CASE OF ACUTE ARTICULAR RHEUMATISM IN A CHILD.

By WEBSTER S. SMITH, M.D.,  
OF WEST MILTON, OHIO.

THE occurrence of acute articular rheumatism in infants and young children has been admitted by some medical writers and denied by others. Senator says, "Children under four are scarcely ever affected;" Bristowe, "Young infants scarcely, if ever, are attacked;" and Bartholow, "Rarely occurring before seven."

The following case will, no doubt, be of some interest on this disputed question.

On October 7, 1882, Mrs. B., called at our office with her boy, aged two and a half years. She stated that on Oct. 5 he had a severe chill, followed by fever and profuse sweating. The next day she thought the symptoms had somewhat subsided, and child better; but on the morning of the 7th the child seemed worse, and she gave him a dose of castor oil, which operated without affording relief. Dr. Pearson, my associate, prescribed for the child antiperiodic doses of quinine in solution with aromatic syrup of rhubarb.

Oct. 10.—Dr. Pearson found the child with a temperature of  $104\frac{1}{2}^{\circ}$ , pulse 150, tongue badly coated, sweating profusely, and on the verge of convulsions. Prescribed aconite and bromide of



potassium. 7 P. M., temperature  $104^{\circ}$ ; the nervous symptoms somewhat abated.

11th.—7 A. M., temp.  $103^{\circ}$ ; and, for the first time, the knee-joint was observed to be swollen, hot, and very painful when moved—the child crying out even from the weight of the bed-clothes. In the afternoon I found the child with the left limb semi-flexed, and his head buried in the pillows, resting almost the whole weight of his body on his head and heels, screaming out every time his hips or the inflamed joint were moved; temperature was somewhat lower, and pulse strong, frequent, and regular. Ordered hot fomentations to the knee-joint, and continued treatment.

12th.—Dr. Pearson observed irregularity of the pulse; temp.  $102^{\circ}$ ; slight delirium on waking; knee-joint still swollen, and exceedingly painful. In the afternoon I saw the case with Dr. Pearson: child very drowsy, pulse irregular, respirations hurried and spasmodic, and inequality of the pupils, but no deafness, squinting, nor intolerance of light and sound. A bronchitis was beginning to develop, with a dry, hacking cough. Dr. Baker saw the case in consultation, and agreed in our diagnosis of acute articular rheumatism. Prescribed the following:

R.—Acidi salicylici,  
Sodæ bicarbonatis, . . . . . aa ʒj.  
Aquæ cinnamomi,  
Aquæ, . . . . . aa ʒj.—M.

Of which the child was to take a teaspoonful every hour; placed a narrow blister over cervical region of spine, and also blisters over knee and hip-joint. Prescribed small doses of tinct. belladonnæ for irregularity of pulse.

13th.—Dr. Pearson and I saw the case together: slight irregularity of pulse, temp.  $101\frac{1}{2}^{\circ}$ , no inequality of pupils, tongue badly coated, but general condition of child improved. Continued treatment, and added small doses of calomel every hour.

14th.—Passed a restless night; pulse 128, temp.  $101^{\circ}$ ; left off calomel, and continued previous treatment.

15th.—Pulse 120, temp.  $100\frac{1}{4}^{\circ}$ ; better; herpes around the lips, and mouth very sore; bowels moved twice during the night. Discontinued salicylic acid, and prescribed chlorate of potash for the mouth.

16th.—Worse; right temporo-maxillary articulation became involved during the night, and was considerably swollen by morning; complained of pain in the phalangeal articulations, but able to move the inflamed hip and knee-joint freely without pain; temp.  $103\frac{3}{4}^{\circ}$ . Prescribed salicylic acid treatment again.

17th.—Passed a very restless night; grasps his jaw with his hand; pulse 140, and regular; temp.  $102^{\circ}$ ; sleeping quietly this morning; taking milk-toast freely for nourishment; temporo-maxillary, the only articulation complained of. Ordered hot fomentations to jaw, in addition to the salicylic acid treatment.

18th.—Temp.  $103\frac{1}{2}^{\circ}$ ; bowels loose; slept well

during the night and complained very little of pain in the joints; some tenderness over the bowels; mouth very sore; left off salicylic acid and gave Dover powder and bismuth every two hours.

19th.—Temp. at 10 A. M.,  $101\frac{1}{2}^{\circ}$ ; pulse 150, regular, but weak; bowels loose; complains occasionally of pain in knee-joint; lies with head thrown back; drank considerable milk this morning.

20th.—Temp.  $99\frac{1}{2}^{\circ}$ ; passed a very restless night; diarrhoea persists; taking milk freely.

21st.—Temp.  $100\frac{1}{2}^{\circ}$ ; diarrhoea still continues; complains of pain in cervical region; head thrown far back; no trouble in other joints; pulse 140, regular and weak; prescribed bismuth.

22d.—Temp. normal; lips very sore; prescribed tar ointment.

23d.—Temp. at 8 P. M.,  $102\frac{1}{2}^{\circ}$ ; humero-scapular articulation involved; great pain on movement of this joint; lips better; diarrhoea better; pulse regular but weak; prescribed aconite and bismuth every two hours.

24th.—Temp. 9 A. M.,  $101\frac{1}{2}^{\circ}$ ; pain in left shoulder; treatment continued.

25th.—Dr. Pearson called in the evening and found fever rising, but did not take temperature owing to restlessness of patient; pain in knee very severe; he prescribed Dover powder, aconite, and hot fomentations.

26th.—I called in the morning and found temperature  $103\frac{1}{4}^{\circ}$ ; pulse full, strong, and rapid; bowels regular; prescribed drop doses of aconite every two hours; ordered patient to be sponged off at 4 P. M.; found child very nervous; temperature still high, ordered bromide of potash. At evening visit child had choreic symptoms; impossible to feel pulse owing to motion of arm; tongue convulsed; movements of muscles of the face.

28th.—I was called hurriedly to see child; found abdomen distended and tympanitic; child having choreic movements of face and upper limbs; temperature  $101\frac{3}{4}^{\circ}$ ; pupils dilated; passages frequent and very offensive; pain over abdomen; ordered bromide of potash, Dover powder, brandy, and hot fomentations to abdomen.

29th.—Abdomen softer; passages normal; choreic movements continued, but patient better.

30th.—P. M., temp.  $103\frac{1}{2}^{\circ}$ ; other symptoms better; child very drowsy.

31st.—A. M., temp.  $104\frac{3}{4}^{\circ}$ ; very dull and restless; prescribed a large dose of quinine to reduce fever; in afternoon child went into coma, from which it did not arouse until November 1, and then took small amount of brandy.

Nov. 1.—Temp.  $102\frac{1}{2}^{\circ}$ ; child in coma.

2d.—Coma continues; died at 3 P. M.

There was some difficulty in making a diagnosis of the case in the start, the knee-joint symptoms not manifesting themselves until October 11. The remission of symptoms, October 6, led us to look at first at the case as one of intermittent trouble. Also the condition of opisthotonos led us to consider cerebro-spinal meningitis in making our diagnosis.

The diagnostic provings we would get, after looking at the history of the case, would be these: the frequent high temperature, the number of joints in-

involved, the pericarditis, and the choreic symptoms following in the latter part of the disease.

Salicylic acid was given and discontinued several times during the case, owing to the severe symptoms it produced on the mucous membranes.

Since reading an article in the October number of the *American Journal of the Medical Sciences*, on "Rheumatic Leucoinotitis," by Dr. Buckler, of Paris, considerable interest attaches to the case in regard to the bronchitic symptoms. These attacks were fleeting, for instance, that of October 12, in which, I have no doubt, the white fibrous tissue under the mucous membrane of the bronchial tubes was the seat of the rheumatic trouble.

The death was due to hyperpyrexia and coma, a fatal termination of the disease according to Bartholow.

## HOSPITAL NOTES.

### BOSTON CITY HOSPITAL.

(Service of C. D. HOMANS, M.D.)

#### EXCISION OF BONES OF THE FOOT; IODOFORM POISONING.

(Reported by ROYAL WHITMAN, M.D., House Surgeon.)

THE patient, an anæmic girl, 20 years of age, entered the hospital May 16, 1882, and gave the following history:

One year before, she had sprained her left ankle. The accident was followed by pain, swelling, and stiffness in the joint, which confined her to the house for five weeks, and since then she has been unable to walk without the aid of a crutch. About one month before her entrance into the hospital the ankle began to swell, and she noticed that the foot was slightly displaced outwards.

The examination showed the following condition:

The left foot was slightly everted and displaced outwards, and over the inner malleolus was a prominent swelling, fluctuating and tender on pressure, about two inches long and one inch in diameter. There was some stiffness about the ankle-joint, and motion was slightly painful. The fluctuating point was incised, and a considerable quantity of pus was evacuated. No dead bone was discovered, and splints and poultices were applied. The joint, however, gradually became more swollen and painful, and the patient began to show signs of constitutional disturbance.

June 2.—Incisions were made upon either side of the joint, and extensive disease of the bones was discovered. A horse-hair drain was then passed between the astragalus and os calcis. During the two following weeks the pain became more severe, and the patient rapidly grew worse; and on June 23, the patient having refused amputation, Dr. Homans decided to attempt to remove all the diseased bone.

The patient was etherized and the former incisions upon each side of the joint were enlarged. The astragalus was then removed entire. The os calcis, which was also in a soft, carious state, was then removed, with the exception of about three-fourths of an inch of the posterior portion to which the tendo Achillis is attached, from which the body of the bone was removed with the chain-saw.

Nearly all of the tarsal bones, which were almost universally diseased, were removed with the bone forceps. The disease had not apparently affected the lower surface of the tibia or the metatarsal bones. The immense cavity was then packed with carbolic

sponges, and the collapsed foot brought up into fair shape and splints were applied. After the operation, the pain, which had been severe, was entirely relieved.

27th.—The leg was placed in a plaster splint, with openings on either side, and the cavity of the wound was packed with iodoform and absorbent cotton, which was allowed to remain for two days.

On the 29th inst., it was noticed that the patient seemed somewhat drowsy. She suffered no pain, and healthy granulations were springing up from all sides of the cavity.

30th.—The drowsiness increased, and the patient seemed somewhat stupid. There was no pain or rise in temperature or pulse.

July 1.—Patient remained in about the same condition.

2d.—The patient continued in the same drowsy, stupid condition, but was also at times hysterical and slightly delirious. The iodoform was removed, and the wound carefully cleaned and dressed with chlorinated soda wash.

3d.—The patient was drowsy during the day, but violently delirious during the night.

4th.—This condition gradually passed off. After this her symptoms progressed favorably.

20th.—The cavity had been nearly closed by granulations, and the external wounds had commenced to cicatrize.

August 1.—The patient could support the foot, which had retained nearly the original shape. The external wounds were slowly cicatrizing, and there was but a moderate amount of purulent discharge. A few fragments of necrosed bone could be felt. There was but little pain, and the patient's condition was good.

25th.—Though the patient was progressing as favorably as could have been expected, yet she decided that she could not remain an invalid for the six months or a year necessary for her recovery, and insisted upon having the leg amputated, which was accordingly done by Dr. Thorndike, at the junction of the middle and lower third.

An examination showed but little evidence of disease in the foot. The tibia and fibula were in close contact with the fragments of the tarsal bones, and of the os calcis, and a variety of false joint had formed, showing the possibility of a recovery after such an extensive removal of diseased bone. The patient rapidly recovered, and was discharged October 5th.

There has been one other case of suspected iodoform poisoning at the hospital. It occurred in the case of a boy on whom an operation for the removal of necrosed bone from the tibia had been performed. The resulting cavity, which would contain, perhaps, one-half drachm, was packed with iodoform, which was allowed to remain as a permanent dressing. In about two weeks after its introduction, it was noticed that the boy was becoming drowsy, falling asleep at all hours. Otherwise his condition was good. The iodoform was removed, and this condition passed off.

Though a large quantity of iodoform has been used at the hospital during the past year, these are the only cases in which any symptoms of poisoning have been noticed.

## MEDICAL PROGRESS.

A CASE OF EXTIRPATION OF THE LARYNX.—DR. KARL MAYDL reports a successful case of extirpation of the larynx, performed in Prof. Albert's clinic, in Vienna, on a man, aged fifty years, for an extensive carcinomatous tumor of the larynx which interfered with respiration and deglutition. Tracheotomy was first performed, and Trendelenburg's canula introduced and allowed to remain for three days. Recovery

rapidly occurred and an artificial larynx was inserted.  
—*Wiener Med. Presse*, December 31, 1882.

**PARACENTESIS PERICARDII.**—A case of acute pericarditis with effusion, occurred in the Leeds Infirmary, under the care of DR. CLIFFORD ALLBUTT, for which paracentesis was performed, about one ounce of bloody serum being removed; recovery took place. The drugs employed in the case were various, and given, with the exception of salicylate of sodium, rather with the idea of combating the tendency to death than with any specific notion, and consequently have not been noted. It may be well to note that blistering was discarded. Among the many points of interest in the case, the following may be specially noted: 1. The rather doubtful rheumatic nature of the case at the commencement, and the failure of salicylate of sodium to relieve. 2. The total absence of all joint affections, assuming it to have been a case of rheumatic fever. 3. A point so difficult to display in the notes, but so obvious to all who saw the case from day to day; the rapidly downward course of the case immediately prior to the aspiration, and the unaided part the operation played in saving life. 4. The comparatively rapid absorption of the effusion after the withdrawal of so small a portion of it.—*Lancet*, January 27, 1883.

**MYXCEDEMA.**—M. GUERLAIN has observed a remarkable case of myxœdema, or pachydermatous cachexia, supervening on a wound of the neck. M. Verneuil points out that the nervous nature of this affection now appears to be clearly demonstrated; and that it is perfectly admissible that, in the case above referred to, as in many other diseases, the wound may have an influence on the central nervous system capable of bringing on special phenomena.—*British Medical Journal*, February 3, 1883.

**COMPRESSION OF THE AORTA IN POST-PARTUM UTERINE HEMORRHAGE.**—DR. WILMART, of Brussels, relates, in the *Presse Méd. Belge*, a case of atonic uterus in which, after the rapid completion of delivery by the forceps, alarming uterine hemorrhage set in, which reduced the patient to a moribund state. Having administered ergot in vain, he had recourse to the application of pressure by means of the fingers between the third and fourth lumbar vertebrae, the patient being placed in a position with her head downwards and her feet uppermost. The compression of the aorta had to be maintained for a long period, every removal of the fingers being attended by a recurrence of the hemorrhage; but eventually the compression, aided by ergot and brandy, proved completely successful. Dr. Wilmart observes that few know the difficulty and pain caused to the operator while making this compression for a sufficiently long time, especially, as in his case, where there is no assistant at hand.—*Med. Times and Gazette*, February 3, 1883.

**CARBAMIDE AS A SUBSTITUTE FOR QUININE.**—The *Journal d'Hygiène* learns from Gen. Kokhowski that DR. BELVOUSOFF has discovered an efficient successor for quinine. Belvousseff, Prosector of the University of Kharkoff, presented his memoir before the Russian Commission of Hygiene on the 5th of October last, recommending carbamide, the rational formula of which is



as the substitute for quinine.

From experiments made in the hospitals, the following results were obtained: 1. That in cases of intermittent fever carbamide acts as a specific. 2. That

this remedy can be employed in many other complaints to reduce the temperature of the patient; it is, moreover, without taste, and does not depress the nervous system.

This action of carbamide is easily understood in the light of the latest researches on uræmia. It is also well known that in southern Russia and Montenegro the peasantry are accustomed to cure themselves of intermittent fevers by the use of urine as a medicine.

Belvousseff has also shown that carbamide instantly kills the lower organisms, such as bacteria and vibrios, just as quinine does.

From an economical point of view, says the writer, the discovery is very important; as carbamide is much cheaper than quinine.

[Carbamide, or urea, can be obtained from urine, but is usually made by the action of cyanate of potash on sulphate of ammonia.]—*Scientific American*, Feb. 10, 1883.

**THE EXPLORATION OF THE BLADDER BY PERINEAL SECTION.**—At the meeting of the Royal Medical and Chirurgical Society, held January 23, 1883, SIR HENRY THOMPSON asked attention to a new method of investigating obscure diseases of the bladder, which promised to be valuable in certain conditions occasionally met with. Every one sometimes meets with a case in which the symptoms of vesical disease are severe and obstinate; and, although very careful examination is made, is unable to arrive at a rational diagnosis. The occurrence is, doubtless, not a common one; in the great majority of cases, carefully made observations demonstrate the nature and seat of the disease. But for the exceptional cases, always important—cases generally marked by frequent or persisting hæmaturia of some standing, manifestly not renal, and without local sign of cancerous tumor—he proposed to take decided action, and to submit, further, that such action should not be unduly postponed. The essential step in the method proposed was to examine the entire internal surface of the bladder with the finger, by which means we can recognize the presence of any tumor, large or small, the existence of encysted calculus, etc. The method of doing this he illustrated, and showed it to be a proceeding simple and easy of performance, and at the same time one which involved little, if any, danger to life. It consisted in making a small opening from the raphe of the perineum to the membranous urethra, which was opened on a grooved staff, just enough to admit the left index finger to enter the canal and to be pushed on to the neck of the bladder. Provided the anæsthesia of the patient was so complete that the abdominal muscles were perfectly relaxed, every portion of the internal surface of the bladder might be brought consecutively by suprapubic pressure into close contact with the tip of the finger, and any deviation from the natural condition, however slight, might be noted. The operation was an external urethrotomy only, and involved neither the prostate nor the bladder. The application of the proceeding, not only to diagnosis, but subsequently to treatment, was then discussed. It was shown to offer facility for the removal of tumors, impacted calculus, etc. Seven or eight cases in which the operation had been performed were cited, and several examples of tumor were exhibited which had been removed by the author. These latter were examples of a disease which was inevitably fatal unless removed by operation. The signs and symptoms of their presence were discussed; great care was necessary in examining the state of the patients before having recourse to operation. The two conditions, the absence of which it was important to be assured of before interfering, were renal disease and cancer



Hæmaturia from either of these sources of course absolutely contraindicated an operation.—*British Med. Journal*, January 27, 1883.

**INTRA-UTERINE STRANGULATION OF A FÆTUS BY ITS OWN UMBILICAL CORD.**—In the *Centralblatt für Gynäkologie*, January 20, 1883, Dr. E. FRAENKEL reports the case of a woman who was delivered of twins, one living, and the other dead and in a macerated condition, the death evidently having been produced by compression of the umbilical cord, which was twisted five times tightly around its neck and separated from its placenta.

**DETECTION OF BACILLI IN THE BREATH OF TUBERCULOUS PATIENTS.**—By the following simple method, Dr. R. CHARNLEY SMITH has succeeded in demonstrating with facility the presence of the bacilli of tubercle in the breath of patients suffering from true tubercular phthisis. For which purpose, he allows the patient to breathe, at frequent intervals during the day, through two thin sheets of pyroxyline or gun-cotton, one layer in front of the other, and both of which are placed in the outer compartment of an ordinary "pepper duster" respirator. The cotton when so arranged will act as a double filter—the external layer removing from the in-going air all the suspended particles, such as dust, micro-fungi, starch, etc., which are always more or less present in it, and which it is desirable to exclude; the internal layer retaining only those particles which come from the lungs—viz., micrococci, bacilli, and some epithelial scales. It is, therefore, in the layer which has been next to the mouth of the patient that he seeks for the bacilli peculiar to this disease. This he does by converting the pyroxyline into collodion by dissolving the former in a mixture of rectified spirit and ether. By this means the whole of the cotton fibre dissolves, but the organisms which have been emitted from the lungs are unacted on by this menstruum, and remain suspended in it, but not visible to the naked eye.

To render the bacilli manifest, his plan is to pour the thin collodion thus formed on a microscope slide and allow the fluid to run uniformly over the surface of the glass, then immediately to turn the glass on one of its edges, that only the merest film of collodion may remain on the glass. The thinner the film produced the more successful will the experiment be. The film is then to be stained. This may be done by one of the methods now well known to the profession, such as that of Ehrlich or of Heneage Gibbes.—*Lancet*, Jan. 20, 1883.

**RETENTION OF A DETRUNCATED HEAD AND THE PLACENTA IN UTERO FOR FORTY DAYS.**—This astonishing case is reported in a recent number of the *Archiv für Gynäkologie* by Dr. ALOIS VALENTA. The patient was thirty-five years old, and this was her fourth child. Labor came on at term, the child presenting with the shoulder. A medical man was called, who proceeded first to detach the lowermost arm, and then to bring down the feet. He delivered the body, but could not get the head to follow, so he cut through the neck and left the head behind. Two other doctors were then called in, but all they did was to administer ergot and advise that the patient should be taken to a hospital. This her husband would not hear of, and so nothing was done. Eight days after the medical men had seen her, a midwife was called in; but she did nothing except syringe the vagina with warm water every two or three days. The patient all the time had no bad symptoms—no rigor, no particular pain, no bladder or rectum trouble, ate well, and slept well; the only thing was that she felt weak, and that the lochia stank insufferably. Thirty-eight days after the labor

the patient rebelled against marital authority, and had herself taken to the hospital. When seen there, her pulse was 72, temperature 99.5°. There was no sign of uterine action, and the uterus seemed to have undergone complete involution, being spread like a thin cap over the retained head. Three days after admission, the vagina having been first repeatedly shrined with a three per cent. solution of carbolic acid, the cervix was dilated with sponge and tupelo tents, and repeated doses of ergot were given. This brought away discharge and small fragments of bone, but the patient felt no pain, although intermittent hardening of the uterus was perceptible. After dilatation, the bones of the foetal head were seized, as they could be got at, with strong polypus forceps, and carefully removed. The chief difficulty was found with the parietal bones, which were in such close coaptation with the uterine wall that it was difficult to seize them, and when seized, it was necessary to double them up (a thing not easily done) in order to get them through the cervical canal. About forty bits of bone were taken away. Then the placenta, which looked quite fresh, was detached with the finger, and removed piece-meal—a proceeding which occasioned some hemorrhage. The whole operation occupied about an hour and a half. When it was finished, the uterus was washed out with hot water, and ergotine injected subcutaneously. The patient recovered without a bad symptom. Dr. Valenta has only been able to find in literature one case resembling his. This is recorded by Freund. In his case the detached head was retained for ten years, the uterus, as in Valenta's case, showing no inclination to expel it.—*Med. Times and Gazette*, Feb. 3, 1883.

**THE BACILLUS OF TUBERCLE.**—For several months Dr. G. A. HERON has been studying the clinical and diagnostic applications of Koch's discovery of the bacillus of tubercle, and from his experience of sixty-two cases of phthisis of both sexes and of various ages, in which he was able sooner or later to detect it, he has come to the conclusion that such observations are of the highest value both in diagnosis and prognosis, apart from their pathological interest and bearings on public hygiene. Not only are the bacilli absent from those cases of chronic catarrh, emphysema, bronchiectasis, etc., which closest approach to tubercular phthisis, and always present in tubercular cases, but the number—e. g., from three or four to thirty or fifty in a field—bears a direct proportion to the probable rapidity of the course of the disease to a fatal termination. The worst cases are those in which the bacilli are grouped in dense masses. Koch has found that the dried sputa from a hospital floor were as effective in inducing tubercle in animals when inoculated as were fresh sputa, and though hereditary and other conditions may play a part in the propagation of phthisis, there can be little doubt of its infective character in the light of recent discoveries.—*Med. Times and Gazette*, February 3, 1883.

**THE ACID OF THE GASTRIC JUICE.**—Dr. V. POULET has made a large number of experiments on the gastric juice of different species of animals subjected to dialysis, and claims that the principal acid of this fluid is neither lactic nor hydrochloric acid, but hippuric acid in the form of acid hippurate of potassium, combined with neutral phosphates of lime and sodium. The author bases this opinion on the microscopic appearance of the crystals and on the fact that when gastric juice is subjected to dialysis, evaporated at 120° C. to a syrupy consistence, and then treated with an excess of caustic potash or quicklime, the characteristic odor of benzene may be recognized on dry distillation.—*Journ. de Méd. de Paris*, January 27, 1883.

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## SANITARY CONSTRUCTION OF FOUNDATIONS.

In the selection of building sites and in the construction of houses, far too little attention is bestowed upon the conditions of the soil and the means of averting the injurious influences arising from a damp and impure state of the ground. It is a well-known fact that all soils, even those of the densest formation, are more or less porous, and are therefore permeable by air and water. It is important to bear in mind that there is a constant circulation of the air beneath the surface of the ground, which depends upon various influences, such as heat, atmospheric pressure, rainfall, force of the winds, etc. The "ground-air," as it has been called, acts as a medium for conveying impurities which exist in the soil, and, in a polluted state, is a prime factor in rendering foundations unhealthy.

At variable depths beneath the surface of the ground, there is a continuous stratum or body of water formed by the saturation of the pores and spaces of the soil, to which the significant name of "ground-water" has been given by German writers. Above the line of saturation or water-level, the soil is simply moist, that is, contains both water and air in variable quantities. A high water-level is the chief cause of dampness of the soil and of the structures above it. There is the greatest difference in soils with respect to their power of absorbing and retaining moisture, and none are entirely without it. The rise and fall of the ground-water, by which the soil is at one time saturated with water and at another exposed in a moist state to the action of the ground-air and heat—conditions favorable to the decomposition of impurities left in the interstices—

is now recognized as having an important relationship to the causation of disease, as had been pointed out by Pettenkofer and others. A knowledge of these facts is essential to a clear understanding of the manner in which certain hidden agencies operate in making a foundation unhealthy, and is indispensable in applying the means to counteract their injurious influences.

A damp or water-logged soil is one of the common causes of disease. Its influence upon the causation of consumption, rheumatism, catarrh, and other diseases, is no longer disputed. On the other hand, dry, porous soils are generally considered healthy, but even such soils may be injurious to health on account of the facilities they afford for the free circulation of air from impure sources, and the possibility of such contamination must be considered in constructing the foundation and ground floors.

We know that air is universally present in the soil, and that it is more or less movable. It is still further important to observe that the air in the ground is in intimate relation with the air in the house. During most seasons of the year the current is from the soil to the house. This is particularly the case in seasons when houses are artificially heated. The modern plan of heating buildings by means of fires in the cellar or basement, increases the chances of the escape of ground-air and favors the diffusion of any impurities it may contain throughout the apartments.

The ground-air may become the carrier of noxious elements derived from a polluted condition of the surrounding soil. Some of the common sources of soil-contamination to be guarded against are badly constructed sewers, leaking gas-mains, leaking cesspools, leaking drain-pipes, and slops and other refuse matters thrown upon the surface of the ground. In cities it is frequently the case that houses are built upon "made-ground," which is largely composed of animal and vegetable refuse matter. Under the influence of an active change of air and water, this organic matter undergoes decomposition, the deleterious products of which are imparted to the circumambient air and borne on its current, under circumstances generally present, through the foundations and basement floors of the dwelling.

We have been accustomed to consider soil-pollution more particularly in its relations to contamination of the water-supply, ignoring the fact of its equally intimate relation to a vitiated condition of the ground-air which is in active intercourse with our dwellings. In cities, where wells are rarely depended on for the water-supply, this latter result is most to be dreaded. Pettenkofer complains that we took rather a short-sighted view when we be-

lieved "that the nuisances of our neighbors could only poison the water in our pumps; they can also poison the ground-air for us, and," he remarks, "I see more danger in this, as air is more universally present, and more movable than water."

The selection of a proper site and a careful regard for "cleanliness of the soil and diminution of the organic processes in the ground of dwelling-houses," are the essential requirements to observe in preventing poisoning of the ground-air.

It is not always possible to select a proper site for a dwelling, especially in populous places. Nor is it always within our control to prevent the defilement of the soil and ground-air, even upon our own premises. Hence the necessity of seeking the advice and appliances of the sanitary engineer in the construction of foundations and basement floors to secure an effectual barrier to the ingress of ground-air and all that it portends.

It is humiliating to observe how very little attention, from a sanitary standpoint, is given to the conditions existing beneath the surface of the ground and to the means of excluding ground-air and damp. It is the super-structure, more especially, which claims consideration. And yet, in the construction of houses, there is no more important subject than that relating to the selection of the site and the sanitary arrangement of the details of the foundation.

In selecting a site a great many important factors influence the decision of the question, but when the choice is unrestricted there need be no difficulty in determining it correctly by the aid of the well-defined rules laid down in works on the subject. But it rarely happens that one has the opportunity of selecting a location which possesses every natural advantage; and hence, the necessity of resorting to art to improve the conditions of the soil and avert the injurious influences associated with polluted ground-air and damp. The means of securing these objects are briefly summed up in an article on "damp-proof material" in the *Sanitary Record* of May 15, 1882, which we quote as follows:

1st. Drainage is one of the chief considerations. It has been found that for a building to be hygienic, the subsoil water ought not to be allowed to rise higher than five feet below the foundations. For this purpose, several lines of drain-pipes laid at this level, and discharging into a suitable outlet, are necessary, and these may be constructed in connection with areas round the walls, with a channel for carrying off the water from higher levels.

2d. The most effectual safeguards are, the employment of impervious materials to check the rise of ground-air, such as covering the site with a layer of Portland cement concrete, or with a coating of asphalt.

3d. The use of damp-proof courses in the walls, such as slate, vitrified materials, asphalt, and perforated courses of stoneware, to prevent the rising of moisture in the walls by capillary attraction.

4th. The ventilation of foundations and basements below the ground-floor, which may be effected by raising the ground-floor above the soil, by dry areas round the walls, and by ventilating-bricks.

#### NEUTRALIZATION OF TUBERCULAR VIRUS.

THE most conclusive evidence as yet adduced in favor of the contagiousness of tuberculosis has recently been brought to the attention of the Academy of Medicine of Paris by DR. VALLIN, in a paper bearing the above title, in which he gave the result of certain experiments having for their object the determination of the effect of disinfecting substances upon the tubercular virus.

To this end, fragments of pulmonary tissue infiltrated with tubercle, and taken from a man dying of phthisis, were bruised in distilled water. This secondary tubercular matter resulting from the inoculation of the first, derived from man, Dr. Vallin used in his experiments. Filtering paper was saturated with the fluid thus obtained, dried, and cut into pieces of equal size. Some intended for control experiments were moistened with pure water, and of the liquid obtained by expression, fifty centigrammes were injected, August 1st, into the peritoneal cavity of healthy guinea-pigs. One was found dead on the 1st of October, in a state of great emaciation. A second was killed November 10th (the 101st day). In both, the liver and spleen were enlarged and very friable, the lungs were stuffed with confluent tubercular masses, in the midst of which the parenchyma of the organ had almost disappeared.

Other pieces of the virulent paper were submitted to the action of various disinfectants: the fumes of sulphurous acid, corrosive sublimate, nitrous acid fumes, etc., before being used for inoculations. In a chamber of fifty cubic centimetres capacity, the little pieces of paper were suspended at the distance of two metres from the floor; the sulphur burned was divided into four separate portions; the chamber was thoroughly closed, and the exposure to the vapor continued twenty-four hours.

The animals inoculated with the paper thus disinfected with quantities of forty and thirty grammes of sulphur, remained uninfected; of two guinea-pigs inoculated with the virulent paper disinfected by twenty grammes of sulphur, in one the abdominal organs were tubercular, while the other remained healthy. With the dose of sulphur at fifteen grammes, a guinea-pig inoculated was found tuberculous throughout; and whenever the quantity of



sulphur burned was less than twenty grammes all the animals were found tuberculous.

Other experiments were made with pieces of paper disinfected with boiling water, which apparently also destroyed the germs, the animals inoculated remaining unharmed. Corrosive sublimate in solutions of the strength of one part in one thousand possessed the same property; so also did nitrous acid.

The important practical deduction from these experiments is that prisons, barracks, hospitals, and schools should be from time to time purified by sulphurous fumigations, which seem at once the most efficient and convenient of the measures employed.

#### THE TREATMENT OF DETACHMENT OF THE RETINA BY NITRATE OF PILOCARPINE.

THE brilliant results which have been attained by the subcutaneous injection of pilocarpine in the treatment of detachment of the retina, are immensely suggestive in respect to the application of this agent for the removal of inflammatory exudations. The strength of the solution employed is one-twentieth, and the dose of each injection is about one-sixth of a grain. The following plan has been found most efficacious: the injections, of the strength above mentioned, are administered in series of ten to fifteen; then a period of repose follows, lasting about eight or ten days, when the injections are resumed again, if necessary. They are usually given in the morning, about two hours after the meal, and inserted at any indifferent point.

The processes which thus go on under our eyes furnish us, in miniature, with a picture of the changes which ensue at any point, the seat of inflammatory exudation. If pilocarpine, when given subcutaneously, at a remote point, can cause the absorption of new material in the eye, will it not accomplish the same results in other tissues? There is here a profitable suggestion. As when exudations occur, the utility of remedies employed against the congestive stage of the inflammatory process ceases, it is, in a high degree, important to be possessed of a remedy which may cause the disintegration and absorption of the new formations. Pilocarpine seems to have this power. Unfortunately, it is so depressing to the vascular system that its use in sufficient quantity is not without danger. It has been used with success to remove pleural exudations, and it may have in the future wider applications in this direction, as we learn how to obviate its depressing effects.

#### ERGOT IN THE TREATMENT OF TYPHOID FEVER.

WE have from time to time noted the novelties of practice in the treatment of typhoid fever, and have published some important practical papers, showing the actual results of special methods. In

the *Gazette Hebdomadaire* for January 5, 1883, we find the conclusions to which Dr. Lardier has been conducted by the observation of 73 cases of typhoid fever treated by the administration of some form of ergot. His first conclusion is that ergot is the most efficient remedy which he has hitherto employed in the treatment of typhoid. He rightly insists on the employment of a good preparation. Treated by a suitable form of ergot in good condition, during four years, he was enabled to determine the real value of this remedy in this disease. Of 73 cases treated by ergot in some form, the mortality was 9; in other words, was less than 13 per 100. In these cases there were no intestinal hemorrhages. The good results in this direction were, therefore, very obvious. In respect to the supposed curative effects, it cannot be doubted that ergot has had a distinct influence over the course of the disease. If the mortality by this method be compared with that which occurs in the course of other plans of treatment, the superiority of the ergot plan cannot be disputed. Such is the conclusion of Dr. Lardier. American experience is wholly new to this method. We trust some of our numerous readers will furnish us with new facts, and carefully recorded experience, demonstrating the real position of ergot as a remedy in the typhoid fever of this continent.

#### RHEUMATISM IN A CHILD.

IN the very interesting case of acute rheumatism in a child of two and a half years, reported in another column, several important questions arise. As Dr. Smith very acutely says, the question of cerebro-spinal meningitis was considered in making up the diagnosis. The joint changes which ensue in cases of meningitis have been described by Dr. Charcot and others. The late Prof. J. K. Mitchell advocated the neurotic origin of rheumatism, and his son, Dr. Weir Mitchell, has published many observations proving the dependence of joint changes on spinal and nerve lesions. It is now, indeed, established that changes in the joints which cannot be distinguished from those of acute rheumatism, occur in cases of disease and in lesions of the spinal cord, the membranes, and the nerve trunks. This admitted, the case of Dr. Smith may be regarded from this point of view. The joint inflammation, the hyperpyrexia, the opisthotonos, and the muscular spasms (choreic), the whole concluding with coma, may be regarded as due to a common factor—meningitis. Whether one or the other view be taken, the case admirably illustrates the remarkable correspondence between acute rheumatism and certain spinal affections, and goes far to prove their community of origin. This admitted, acute rheumatism becomes not merely an inflammation of the fibrous tissues, but a neurotic affection.

## THE PROPOSED ANATOMY ACT.

THE Philadelphia anatomists have prepared a new Anatomy Act very much such as we proposed editorially some time since. It was read in the State Senate for the first time on Saturday last. *We beg our Pennsylvania readers immediately to write to their Senators and Representatives*, and to impress upon them the urgent need for such an Act, the justice of its provisions, and the wisdom of its restrictions. It has still to pass two readings in the Senate and then go to the House.

It creates a Board of Distribution, consisting of the Professors and Demonstrators of Anatomy and Surgery in the incorporated Medical and Dental Colleges of the State, with one representative from each private school of twenty-five pupils or more. All persons having charge of the unclaimed dead to be buried at public expense, are to deliver them to this Board, who direct their distribution equitably, and bear all expenses of such distribution. A bond of \$1,000 is required of all persons receiving them, that they shall be used for the promotion of medical science within the State, and a penalty is affixed to their exportation beyond the State, or to traffic in dead bodies, and to disobedience of the provisions of the law. Colleges and schools are to be first supplied, of course, but any physician or surgeon can obtain a body by filing a bond and applying to the Board.

The Act applies to the whole State, so that any physician or surgeon whose anatomical knowledge is rusty, may refresh and renew it at his home as occasion may require. That such renewed knowledge is needful, as the petition accompanying the bill well states, is evident from the fact that the want of it renders medical men liable to suits for malpractice, and such suits are on the calendar of well nigh every court in the State. The injustice of the restriction of the present law to the unclaimed dead from Philadelphia County alone (for that of Allegheny County is practically unavailable), is startlingly shown by the fact that in the last ten years at the Jefferson and the University, to say nothing of the other schools, there were 2,686 students from Pennsylvania, of whom 1,172 were from Philadelphia and 1,514 from other parts of the State.

Moreover, to give the unclaimed dead of the whole State for dissection, will prevent the desecration of graveyards, and will relieve the counties from the expense of their burial, while aiding the community by the increase of knowledge, and by preventing students from going to other States.

## THE ANALYSIS AND SYNTHESIS OF ANIMAL MOTION.

No one who has heard Mr. Muybridge, of San Francisco, lecture, and seen his remarkable photo-

graphs, can fail to be intensely interested in the revelation of the actual postures of the horse, hound, ox, and other animals, and in the revolution in his ideas of the proper methods of representing them. We had recently the pleasure of attending his lectures to the students of the Academy of the Fine Arts in this city. By a number of successive views at brief intervals by exposures of each photographic plate for not over the one five-thousandth part of a second, he has been able to analyze the various gaits of animals such as the walk, trot, canter, and gallop, and the various poses of man in walking, running, leaping, wrestling, and various acrobatic feats, and then by means of a modified zoëtrope and magic lantern has again reproduced the gaits by a synthesis of the successive plates. The rude blow he has struck at all the artistic representations of motion is at first a perfect surprise. The postures seem extraordinary, often impossible in view of our conventional notions, and not seldom even ridiculous. But the greater our familiarity with them and the longer we study them the truer do they seem.

As a contribution to the physiology of motion, they are most important; among artists they have made a deep impression, and have gained the approval of no less distinguished painters than Meissonier and Sir Frederick Leighton.

## NEW CITY CHARTER FOR SAN FRANCISCO.

We have just received a copy of the new city charter for San Francisco, proposed by the Board of fifteen Freeholders. It is an octavo pamphlet of 204 pages.

In the department affecting medical matters we observe that the coroner is not obliged to be a physician and that he serves for only two years—both very serious errors according to our judgment.

The Board of Health, on the contrary, is well organized, consisting of the Mayor and City Attorney and four citizens, of whom three must be physicians. The Health Officer, who is an appointee of the Board of Health, as is proper, must be a physician, and he is obliged once a quarter to visit each public institution under the control of the Board and to make a sanitary inspection of each public school once a year. Not only physicians, but also householders, must report cases of contagious disease. The Health Officer reports every such case to the Superintendent of the Public Schools, and this latter officer excludes from the public schools all the children in such families until their re-admission is authorized by the Health Officer. This is an excellent practical regulation.

We observe also that the assistant city physician, makes all autopsies for the coroner without extra fees, and that the two surgeons to the City Receiving

Hospital are elected by the Board of Health from among the persons nominated by the faculties of the regular medical colleges.

We notice with satisfaction that Dr. W. F. McNutt is one of the Board of Freeholders who have drawn up this excellent charter.

LABORDE has lately studied, by the experimental method, the actions of quinine and cinchonine. Although they are used as if possessing the same powers, important differences are discovered between them. Hence, the adulteration of quinine with cinchonine, now so much practised in France, is especially reprehensible. Cinchonine produces convulsions of an epileptiform character, which M. Laborde entitles *cinchonic epilepsy*. Quinine in much larger quantity has no convulsant action, but induces stupor, deafness, general muscular resolution, loss of the reflexes, and profound insensibility. The sophistication of quinine by cinchonine seems to be the explanation of peculiar phenomena occurring in some cases of fever, treated by quinine in antipyretic doses.

## REVIEWS.

THE PRINCIPLES AND PRACTICE OF SURGERY. By JOHN ASHHURST, JR., M.D. Professor of Clinical Surgery in the University of Pennsylvania, etc. Third edition, enlarged and thoroughly revised. 8vo. pp. 1064. Philadelphia: H. C. Lea's Son & Co., 1882.

THE appearance of the third edition of any work must always be gratifying to an author, as it is the strongest evidence of public appreciation of his work. A few additions have been made to the present edition, and tables and other statistics have been brought down to date, otherwise it differs but little from the last.

One of the most important points we notice is in the first paragraph of the "Addenda," in which the author records his continued disbelief in the special advantages of Listerism. We confess to some surprise in reading that the results recorded in Mr. Cheynes' *Antiseptic Surgery* are no better than "those which are habitually obtained in this country, at least by careful surgeons who do not adopt the antiseptic system."

The size of the volume prohibits any exhaustive treatment of each topic, but as a text-book, it is clear, succinct, conservative, and fair. As such we commend it unmeasurably.

DISEASES OF THE RECTUM AND ANUS. By CHARLES B. KELSEY, M.D., Surgeon to St. Paul's Infirmary for Diseases of the Rectum, etc. 8vo. pp. xii. 299. New York: William Wood & Co., 1882.

It is an improvement on the old plan of reprinting works of foreign authors, many of them out of date, for the publishers of "Wood's Library of Standard Medical Authors" to furnish their subscribers with the writings of Americans, and fresh ones at that. True, by no means in every case where they have followed the latter plan, has the production justified the use of the term "standard" in connection with the author

selected. Nevertheless, it has been better for the reader, in the main, and in many cases no doubt far more satisfactory to the foreign author who has escaped adoption into this cis-atlantic family and all which it implies.

The book before us is one of the best of this series. It is the work of an industrious and studious specialist, who has added to experience a reading that has apparently been very extensive. The result is a really good book, a book which we think better to have and to consult than any other one book on this subject with which we are familiar, because the author has drawn upon all the good books we know of, and some we had never heard of before, for material to be added to that which his own observation could contribute.

It might seem as if nearly three hundred pages were a great many to devote to the consideration of diseases of the rectum and anus, and yet as we go over Dr. Kelsey's book we do not find them too many, if we except some filled with reports of cases. And, while other authors better known have been able to say what they wanted in less space, we think this one justified in taking more, in order that he may introduce and compare their views and express his opinion upon them. He has thus furnished a sort of *multum in parvo*, an opportunity to be in consultation at one time with a number of the ablest men who have considered this subject particularly, which will prove of real value to the student and practitioner.

## SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 15, 1883.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D.,  
IN THE CHAIR.

AFTER the reading and approval of the minutes of the preceding meeting, the report of the delegates to the New York State Society, signed by Drs. J. L. Adams, W. R. Birdsall, and Arthur M. Jacobus, was read, and upon motion, received and placed on file.

The scientific work of the evening consisted in a paper by DR. W. H. DRAPER, entitled

### DIET IN THE GOUTY DYSCRASIA.

THE relations of food to normal nutrition, to the evolution of vital energy, and to the etiology and treatment of disease, he said, constitute some of the most interesting and important problems presented for the consideration of the practical physician. And it is one of the encouraging signs of the progress of scientific medicine that these problems are daily attracting and receiving wider and closer attention. The day has happily passed by when the selection of food is left to the instincts and intelligence of the patient. The physician is nowadays expected to prescribe the diet as well as the drugs, and the old adage that there is "death in the pot" is leading the laity to seek counsel of the doctor as to what they shall eat and drink, in order to antagonize the consequences of disease and to escape the perils that lurk in the indulgence of the table. It is only necessary to refer to the part which judicious feeding now plays in combating the evils of malnutrition arising either from inherited or acquired disease, to the daily increasing faith in the application of hygienic laws to therapeutics and the diminished confidence in a complicated pharmacy to illustrate the change that has taken place in the medical mind regarding the importance of diet in its manifold relations to health and disease.

The proper dietetic management of gout is a topic of great practical interest, because of the frequency



with which manifestations of the gouty dyscrasia are met with, and because, originating, as it does largely from errors in diet the correction of these errors constitutes an important part in the treatment of the affection.

Gout, as a disease, in the traditional acceptance of the term, is a specific arthritis characterized by the deposit of the salts of uric acid in the affected joints.

Gout, as a diathesis, is a blood crasis, in which there is an accumulation in the blood serum of the uric acid salts, due either to increased formation or defective excretion of these products of proteid metamorphosis. The manifold irritations of the different tissues and the accompanying subjective and objective symptoms are termed gouty.

Since the discovery, by Garrod, of the salts of uric acid in the blood serum of gouty patients, the humoral pathology of gout has certainly had more adherents than any of the many other theories. This pathology, based primarily on the chemical theory of digestion and food transformation, proceeds upon the view that every atom of albuminous or carbonaceous food ingested, whether destined for tissue construction, or the direct conversion of potential into active energy, is finally eliminated for the most part, as urea, carbonic acid, and water. This transformation, of course, is supposed to be effected by a process of oxidation, but neither the exact process nor the share of the various organs and tissues in its accomplishment are certainly known. Recent investigations point to the liver as chiefly concerned, not only in the metamorphosis of the carbohydrates, but also in the formation of urea, so that the arrest in the conversion of starches and sugars, resulting in glycosuria, and the check in the metabolism of the proteids, resulting in lithæmia, may both be due to hepatic derangement. The not infrequent association of glycosuria and lithæmia in the same patient, and the frequent alternation of gout and saccharine diabetes in gouty families are significant facts in support of the common origin of these diseases.

The suboxidation theory of gout and diabetes, ably presented by Bence Jones, has much to commend it from the valuable suggestions it affords in the clinical management of these maladies. Nevertheless, while defective oxidation seems to be an essential factor in the production of gout and diabetes, it is impossible to reduce this factor to the simplicity of a chemical equation. All that can be said at present is that the metabolism of food is in its nature a chemical analysis, modified and regulated by vital force, and resulting in the formation of tissue, and the conversion of potential into active energy. Imperfect blood elaboration must depend upon much beside a disturbance of the proper relation between the amount of food ingested and oxygen inhaled, though this must unquestionably be an important factor in its causation. Heredity, and the mysterious influence of the nervous system complicate the problem; so that while it may be maintained that gout is a disease in which suboxidation occurs, it is not possible to tell whether the suboxidation is the essence of the disease, or only one of its phenomena. Indeed, a much more complex process than the simple accumulation of uric acid in the blood is probable. Uric acid, like urea, is one of the normal results of the metamorphosis of albuminous foods and tissues. In birds and most reptiles it is the final issue of this metamorphosis. It has been supposed, as one atom of uric acid can be split by oxidation into two atoms of urea and one of mesoxalic acid, that uric acid was the antepenult of urea. This, however, is by no means proven. In birds, who consume by their rapid breathing an enormous proportion of oxygen, as well as in the slow-breathing reptilia, the nitrogenous excrement takes the form of urates.

In view of such divergent conditions, variations in proteid metabolism cannot be explained by varying degrees of oxidation.

When we have said that urea is destined for a fluid, and the urates for a solid excretion, we have exhausted our powers of explanation. Moreover, there are clinical as well as physiological objections to the uric acid pathology of gout. Uric acid salts accumulate in the blood in fevers, in disorders of digestion, and in anæmia; but do not cause either the symptoms or lesions of gout. Todd held that gout might occur without an excess of uric acid in the blood, and it is certain that this is true of the atonic and irregular forms. Again, the diminished power of the gouty to digest farinaceous and saccharine foods, tends to stamp uric acid as an epiphenomenon, rather than the sole exciting cause. The primary indigestion is promptly relieved by restricting the diet largely to albuminous foods. This restriction, furthermore, is one of the surest prophylactics against the recurrence of gouty lesions. It is well known that the fermented liquors are among the most frequent exciting causes of acute gout, and cases are not uncommon in which sweet foods and fruits will provoke well-recognized lesions of the disease. This anomaly in the uric acid theory may possibly be explained by the suggestion of Garrod, that the deposition of the urates is due to their insolubility, and as this insolubility is increased by diminished alkalinity of the serum, that the evolution of acids in the digestion of the carbo-hydrates so lessens the normal alkalinity of the blood, that the uric acid salts are precipitated. But this explanation does not do away with the fact that carbonaceous foods may be as much, perhaps more concerned in the causation of gout, than the albuminous foods. The chemical pathology of gout, in view of the conflicting evidence, seems to be still involved in considerable obscurity.

Recent advances in neuropathology have led many to advocate the theory that gout is a tropho-neurosis. The frequency of purely nervous symptoms in gouty persons is daily observed by those who have much opportunity to study the disease. Any of the functions of the entire nervous system may be affected. Psychical disturbances, as hypochondriases and hysteria; derangements of sensation, as neuralgia and dysæsthesia of every variety; and spasm of both voluntary and involuntary muscles, as cramps, grinding of the teeth, asthma and vesical tenesmus, are met with. Often attacks of gout are determined by purely nervous influences, such as nervous exhaustion, whether caused by overwork or mental anxiety, or the more explosive discharges of nerve force in rage and great emotional excitement. The influence of certain diseases of the nervous centres, such as cerebro-spinal meningitis. Pott's disease and tabes dorsalis, in occasioning gouty manifestations, tend to favor the theory of the nervous origin of the affection. Still, such facts do not disprove the humoral pathology. Healthy nervous action must depend primarily on normal nutrition, and this, in turn, on healthy blood elaboration. It may be that gouty lesions are determined as reflex phenomena through the medium of the trophic centres, if such centres there be, rather than by the direct irritation of the affected tissues by the gouty blood, and it is not unreasonable to suppose that nervous exhaustion may produce in these centres greater reflex excitability.

This brief pathological *résumé* sets forth the theories upon which treatment has been based. Clinical experience, however, does not fully bear out either the chemical or neurotic theory. Whether gout is a tropho-neurosis determining the chemical changes, or whether the chemical changes are primary, and determine the lesions through central or peripheral nerve irritation, are questions impossible now to answer. It is fair,

however, to say that the treatment based on the neurotic theory is better adapted to the acute articular lesions, while that based on the humoral theory is better adapted to the management of the constitutional vice.

But the suboxidation, whether primary or secondary, it is shown by clinical experience, occurs not only in the nitrogenous, but also in the carbonaceous foods. The treatment of the gouty dyscrasia should therefore insure, primarily, the complete combustion of both these classes of food. The means of accomplishing this result are partly dietetic, partly hygienic, and partly medicinal. The dietetic means consist in the choice of such foods as the gouty patient most easily converts; the hygienic include the maintenance of an abundant supply of oxygen for the thorough conversion of the potential force of the food into the various forms of vital energy, and the medicinal means the use of such drugs as facilitate oxidation, and the elimination of waste products. Leaving the hygienic and medicinal means for the present, the speaker took up the dietetic means.

The dietetic treatment of gout invites a consideration of the quantity and the quality of food best adapted to maintain a healthy nutrition and a proper equilibrium between the potential energy contained in the food and the active energy evolved in its transformation in the body. An approximate estimate only, as to quantity, is possible. The well-fed classes probably always consume more than is perfectly digested. Experiments of various sorts have been made, but none show, except approximately, the amount really required. Moreover, different individuals require widely different amounts; some persons maintain a good degree of health and capacity for exertion with one-half the quantity of food that others require. Excess of food is unquestionably one of the most important factors in the causation of the evils arising from suboxidation. This excess may be positive or relative; positive when it is more than can, by any possibility, be oxidized, relative when it is more than is required by the habits and occupation of the individual. The proper quantity of food is necessarily variable, and must be proportioned to the age of the individual and to the amount and nature of the work to be performed.

Authorities have almost uniformly held that gouty patients should use albuminous food sparingly, and that their diet should consist mainly of non-nitrogenous articles of diet, giving preference to the farinas. This teaching is based on the theory that uric acid is the offending substance, and this being one of the products of imperfect metabolism of nitrogenous foods, such foods should be largely withheld. A personal experience of fifteen years led the speaker to believe that while such may be the logical deduction of the uric acid theory of gout, clinical facts do not bear it out. The non-nitrogenous rather than the nitrogenous foods should be excluded.

Gouty persons, it is well known, have but limited capacity for the digestion of carbo-hydrates, the sugars and the starches. They occasion, in whatever form used, more dyspeptic trouble than albuminous foods, causing the acid and flatulent indigestion with its accompanying reflex disturbances that generally precede the explosion of gouty attacks. What acute observer has failed to notice that the dyspeptic disorders of the children of gouty parents are especially provoked by saccharine and amylaceous foods?

It is impossible to satisfactorily explain why the lithæmic condition should be brought on by the indigestion of carbonaceous food. If, as modern physiology tends to show, urea as well as glycogen is formed in the liver, it may be that over-taxing the functional activity of this organ manifests itself more readily in the incomplete conversion of the nitrogenized than in

that of the non-nitrogenized foods. Whatever may be the explanation, however, the clinical fact remains, that the conversion of albuminous food is more complete with a minimum of carbo-hydrates than it is with an excess of them.

The diet in gouty subjects, therefore, is similar to that called for in glycosuria. The exclusion of the carbo-hydrates need not be so complete, however. The degree of suboxidation which checks the transformation of the starches and sugars in diabetes mellitus is greater than that which results in the production of the various acids which are formed in the conversion of starch and sugar into carbonic acid and water. The classes of food in the order of their indigestibility in the gouty diathesis are, first, the sugars; second, the starches; third, the fats. Above all, fermented alcoholic substances are productive of the greatest disturbance. Experience has taught this to the laity, as well as to the profession. There is a striking difference in the effects of the distilled and fermented liquors. Gout is certainly more prevalent where fermented rather than where distilled beverages are used, *e. g.*, it is much more common in England than in Scotland or Ireland. In Russia and Poland, where spirits are more exclusively used, it is said to be rare. Moreover, fermented liquors differ in their tendency to induce gout. The heavier wines, sherry, Madeira, and port, are more mischievous than the lighter wines of France and Germany. Nevertheless, these wines, especially the richer clarets, Burgundies and Rhine wines, frequently give rise to acute gout, and the gouty habit. Malt liquors are unquestionably pernicious as gout producers, especially the stronger English and Scotch ales, and, to a less degree, the lighter English, American, and German beers. Cider is also injurious, as, for example, is shown by its action in certain districts of England. Although acute articular gout is said not to be common in New England, where cider is much used, it undoubtedly develops the irregular forms of gout. The large amount of sugar in cider favors the production of the acid dyspepsia which is a common antecedent in the formation of the gouty dyscrasia. Malt liquors also contain more or less unfermented sugar. These, even the lightest varieties, should be absolutely prohibited. Though beer and ale drinkers are apt to suffer more often and from a greater variety of gouty manifestations than wine drinkers, it may safely be said that the less wine ingested the better. Wines are detrimental in proportion to the quantity of unfermented sugar they contain. Very few contain absolutely none. Some of the light Hocks, Moselles, and Bordeaux wines are said to contain none, and the driest of the dry champagnes certainly contain very little. They, therefore, are the best varieties to allow the victim of gout. But these are not always to be trusted. Most imported clarets contain sugar, and are fortified with alcohol to check fermentation, and they are very often the source of gout in some of its forms. Sherry, Madeira, and port contain the largest proportion of unfermented sugar, and are, therefore, *par excellence*, gouty wines. The safest alcoholic beverage for the sufferer from gout, if he uses any, is a very dilute spirit, and this should always be taken with food—never upon an empty stomach. Sufferers from the regular forms of gout usually learn by their own experience that they should use spirits moderately, if at all, and that they should entirely abstain from fermented liquors; but sufferers from the irregular forms, such as the cutaneous, and mucous, and the innumerable gouty neuroses, not recognizing their ills as of gouty origin, frequently indulge in what they deem the moderate use of beer and wine.

Next to the fermented liquors, the use of saccharine foods should be restricted, as common, no less than

professional experience dictates. This prohibition sometimes involves abstinence from the sweet and subacid fruits, which are for the most part highly flavored mixtures of starch, sugar, and acid. Paroxysms of articular gout, and more frequently the cutaneous and mucous irritation from which gouty persons suffer, follow indulgence in strawberries, watermelons, apples, and grapes.

The third class of interdicted foods are the starches. These form necessarily so large an element in ordinary diet that their limitation in the regimen of the gouty applies only to their excessive use. This excessive use, however, is often met with, probably because of the common prejudice against animal foods as a cause of gout. The feeble capacity for the digestion of farinaceous foods occurs most frequently in those inclined to obesity, and in those whose occupations are sedentary, or whose lives are largely spent indoors, and in the indulgence of indolence and ease. It is less common in those whom necessity or pleasure lead to much open-air exercise.

The fats are easily digested, according to the speaker's experience, by most gouty dyspeptics—a fortunate fact, since in the anæmic state, which frequently accompanies chronic gout, the fatty foods are of inestimable value. Milk, in persistent and rebellious lithæmia, is one of the best articles of food, and a purely milk diet constitutes a precious resource in cases in which the disease cannot be otherwise controlled.

The succulent vegetables, as tomatoes, cauliflowers, cabbages, asparagus, artichokes, cucumbers, and indeed almost all the vegetables, except such as are purely starchy like potatoes, or starchy and saccharine like squash and beets, may be used with safety.

In conclusion, the principles upon which the diet of gouty persons should be regulated are mainly, in a modified form, those upon which the diet in glycosuria is based. As regards quantity, attention must be paid to the age, habits, environment, and occupation of the individual; as regards quality, to the habits and occupation, and especially to the fact that the ability of gouty persons to digest sugars and starches is always more or less enfeebled. A bill of fare for the gouty dyspeptic is not so uninviting as it might at first sight appear. If he is an out-door worker and accustomed to much muscular exercise, he may need to forego alone the fermented preparations of alcohol, and be able to give free rein to his appetite for all the viands which the animal and vegetable kingdom supply. If he is an indoor worker and engaged in intellectual or the more delicate mechanical occupations, the victim of a limited supply of oxygen and a feeble circulation, he had better not try to live on potatoes and puddings, or to quench his thirst with beer and wine.

DR. HODDEN remarked, in opening the discussion, that he endorsed the views expressed in the paper, especially as regards treatment. An experience of four or five years convinced him that the results of the diet advocated were as had been stated. The restitution of the carbo-hydrates and the free use of nitrogenous foods, had counteracted the evil effects of the gouty dyscrasia in the subacute and chronic cases, which had chiefly come under his management. The urates of sodium were thereby diminished in the blood and urine. The return of the gouty symptoms when the diet was not properly managed showed that there was something more than theory in the views set forth regarding proper feeding. He had given salicylate of sodium several times a day for a considerable time uninterruptedly, but it had had no other effect than to counteract the acidity of the stomach. Comparative study of birds and of the carnivorous and herbivorous animals, was not only interesting but instructive. Gouty deposits are found in the feet of parrots and

pigeons. Carnivorous birds kept in confinement show no such deposits. In herbivorous animals, for instance the horse, it is not uncommon to find deposits in the form of the urates of sodium. The disease commonly known as ringbone is due to such deposits. No deposits of the urates are found in cats or dogs. These facts were suggestive and supported the line of treatment recommended in the paper, by the pursuance of which much better results were obtainable than had been met with heretofore by other methods.

DR. M. PUTNAM-JACOBI thought that a statement to the effect that there was a condition of suboxidation, did not correlate the facts in this disease; the facts of heredity, the nervous phenomena, etc., which existed. As to the value of a purely meat diet in diminishing uric acid, she could call to mind many cases which proved it. Before restricting patients to a diet consisting of meat and gluten bread, she determined the existence of an excess of uric acid and urea in the urine by a quantitative chemical analysis. An enormously fat woman under treatment for obesity, being placed upon this strict diet, became so prostrated in the course of ten days that it was thought impossible to continue it. However, by the administration of nux vomica and nitro-muriatic acid, she did continue the diet, with the result of a reduction in weight of forty pounds at the end of a year, together with an increase in strength.

DR. JANEWAY called attention to the fact that where a milk diet is used we are giving a good deal of sugar, and that, too, in a form that will admit of fermentation. If we accepted the neural pathology, we ought to find more nervous patients suffering with the disease. He had examined many joints of nervous patients without finding any trace of it. He called attention to the fact that cases of gout may be determined by an injury or by nervous prostration. On the whole, he was inclined to look with greater favor upon the humoral than upon the neural pathology of the disease.

The PRESIDENT, being called upon for an expression of opinion, said that the views advanced in the paper were so completely at variance with his own that he felt the need of more time for study and reflection before formulating his ideas. He then cited a number of cases, each of which presented contradictory symptoms to all the others, and were relieved or made worse by exactly opposite kinds of remedies. He thought that no one plan of treatment would answer for all cases. It was necessary to study the peculiarities of each case, and be governed accordingly when prescribing.

DR. FLINT thought that the subject under discussion could only be settled by clinical experience. He would feel extremely doubtful in regard to accepting any treatment as final which was based upon pathological views derived from neurology or chemistry. He thought there was another point to which sufficient importance had not perhaps been attached, and that was the element of dyscrasia. There was probably no disease in which dyscrasia played so strong a part as in gout. The hereditary influences should always be sought for. The disease develops at a certain period of life, but the precise reason for this we cannot say.

DR. DRAPER, in closing the discussion, said he had found no difficulty, or at least very rarely, in getting patients to adhere to the diet prescribed. He had not had occasion to make the diet so strict as suggested by Dr. Jacobi. He thought patients who were confined to a diet of that sort would be very apt to become rebellious after a time and require some indulgences. He had never found any difficulty in adding to this diet green, succulent vegetables, and they certainly contribute greatly to the comfort of the patient. Dr. Janeway's remark in regard to milk was true, and



this was antagonistic to the theory that gouty patients do not digest sugars. But in giving milk he thought it was necessary to give more or less alkali. When soda was given with milk the latter was well borne, and gave no disturbance. This he supposed was due to the fact that any tendency to acidity was promptly corrected by the soda. The speaker entirely concurred with Dr. Flint in his injunction that this question is to be settled clinically, and in giving the diet he had stated that its good effects could not be explained by pathology or justified by it. He did not think any one could explain why an animal diet agreed with gouty persons, but his experience has shown that it did. He supposed all who had seen much of gout and studied it had met with many such contradictory facts as had been cited by the President. He could see no explanation for many of them, except on the ground of a neural pathology.

#### OBSTETRICAL SOCIETY OF PHILADELPHIA.

*Stated Meeting, Thursday, February 1, 1883.*

THE PRESIDENT, R. A. CLEEMANN, M.D., IN THE CHAIR.

DR. B. F. BAER read an

ANALYSIS OF TWENTY-SEVEN OPERATIONS FOR THE RESTORATION OF THE LACERATED CERVIX UTERI, WITH SPECIAL REFERENCE TO THE EFFECT ON STERILITY AND LABOR.

In the discussion which followed the reading of Dr. Playfair's paper on "Trachelorrhaphy, or Emmet's Operation," before the Obstetrical Society of London, on March 1, 1882, Dr. Herman, in the course of his remarks, said that "The American literature on the subject consisted mostly of general statements. Few writers had published cases, and the cases were mostly complicated ones." There is some force in these words. But, to avoid a monotonous repetition, it is desirable only to publish such as are strongly illustrative of the class to which they belong, or such as bear directly upon any point which may be under discussion.

In the *American Journal of Obstetrics*, for January, 1883, Dr. P. J. Murphy, of Washington, D. C., makes some "Observations on the Effects of Trachelorrhaphy on Fertility and Parturition," and comes to the conclusion "That repair of lacerations of the cervix uteri is usually followed by sterility." Now, there is no doubt of the truth of this statement, so far as it goes, but I think he ought rather to have said that, in those cases in which sterility followed the operation, that condition also preceded the repair of the cervix in the majority of instances, either as a result of the laceration itself, or of its effects on the uterus and its appendages; and that the operation was not the cause of the sterility, but that it simply failed to cure it.

The only way to arrive at anything like a correct conclusion on this subject, is to take a number of cases (it need not be large), and analyze them, and this I purpose doing with mine.

Of the twenty-seven cases in which I have made the operation, six were either widows, or had reached or passed the menopause, and must therefore be excluded from the analysis. This leaves twenty-one cases to be reported upon in this inquiry. Of these twenty-one cases, thirteen had been sterile from five to sixteen years previous to the operation, and I think, for reasons which I will give farther on, that they ought also to be classed as beyond the probability of becoming pregnant. In the remaining eight cases, pregnancy had occurred within five years, but had resulted in abortion in five. In twelve of the twenty-one cases, from one to five abortions had occurred in each subsequently to the occurrence of the laceration. This

gives abundant proof of the ill-effects of the lesion and its results, subinvolution, chronic hypertrophy, cellulitis, oöphoritis, etc., on fertility.

Is the assertion that sterility usually follows, as a result of the operation, correct? I do not think so; provided, of course, that the operation was properly made, that the os was not made too small, and that immediate union followed the coaptation of the parts, so that there was left the minimum amount of cicatricial tissue to interfere with the normal resiliency of the cervix.

The oftener abortion occurs, as a rule, the greater and more persistent will be the histological changes in the uterus and its appendages, which finally result in sterility.

The majority of cases in which the operation has been made have been of long standing, because the operation is new, and there were many old cases of so-called "ulceration" with chronic hypertrophy, waiting ready to be experimented upon with this as they had been before with many other old and new remedies.

Is this last new remedy followed by any greater success than the old in the reduction of the size of a large uterine body, which has become hard and fibrous from connective-tissue hyperplasia? I think not; and hence its failure to cure sterility of long standing, from this cause. But, for the cure of certain cases of hypertrophy of the cervix, inflammation, ectropion and abrasion of the mucous membrane, with their local and remote symptoms, and possibly, even probably, preventing epithelioma, and in the more recent cases for the cure of subinvolution, abortion, and sterility, the operation is an immense stride in advance of the old way of destroying the tissues of the cervix by amputation, or by the application of the hot iron or the potential cauteries. It is an advance, because it restores the cervix instead of destroying it.

The following case proves, I think, that abortion may result from laceration of the cervix, although none of the usual inflammatory consequences of the lesion are present.

*Case I.*—Mrs. M. L., æt. 30, consulted me in January, 1881. She was delivered of her first child two years previously. The labor was rapid. The child was fully developed and vigorous. There was nothing unusual in the puerperal period, and she seemed to be well. Ten months after the birth of the first child she became again pregnant. Between the second and third months of gestation the product of conception was expelled with little pain, but it was followed by severe hemorrhage. Within three months she was again pregnant, and aborted at about the same time and manner as previously. This was followed within six months afterwards by a third pregnancy, and abortion under similar circumstances. The last occurred about two months before she consulted me. She had absolutely no symptoms of uterine disease, such as leucorrhœa, menorrhagia, and the pain which always results from congestion and hypertrophy of the uterus; and expressed herself as feeling as well as ever she had in her life. There was no evidence, whatever, of syphilitic infection, either in the patient herself or in her husband. They are both robust and well developed.

*Examination.*—The perineum and vagina were normal. The uterus was in normal position; it was neither congested nor enlarged; but the cervix was lacerated on the left side to a point beyond the vaginal attachment, apparently approaching and involving the fibres of the internal os. On the right side there was a mere fissure only. There was no hypertrophy, eversion, or abrasion of the mucous membrane. The sound passed to a depth of two and a half inches. I expressed the opinion that the lacerated cervix and the abortions

stood in the relation of cause and effect; and I advised an operation for the restoration of the torn cervix.

On March 10, 1881, I denuded the surfaces, being careful to remove very little tissue, and to freshen the edges as far up towards the internal os as possible. I then placed six carbolized catgut sutures, and clamped them with shot. I used the gut suture here in preference to the silver wire, because, as the cervix was not large, and the tear principally unilateral, there would not be much tension, and for the additional reason that I especially did not want any cutting of the tissues by the sutures, which is more apt to occur when wire is used. Another advantage of gut suture is that the line of union need not be disturbed by the removal of the stitches. On the seventh day after the operation I inspected the cervix through Sim's speculum, and found the sutures all *in situ*, though they were partially absorbed. Union was perfect. Two days afterwards the shot were lying loose in the vagina. There had not been the slightest discharge from the united surfaces since the operation.

On June 3, 1881, the patient reported that she had not menstruated for seven weeks, and there was every indication that she was pregnant. A week later I was requested to visit her. I was much chagrined to find when I arrived that she had aborted. This was very discouraging, but I found some comfort in the character of this abortion. More pain attended the expulsion, and less hemorrhage followed it than on the previous occasions. This I ascribed to the restoration of the symmetry of the cervix, and its better retentive power.

On October 9, 1881, she reported that she was about two months pregnant, and feeling well; and on May 7, 1882, she was delivered at full term of a fully developed healthy boy, after a perfectly normal labor of six hours' duration. Examination two months afterwards revealed not the slightest laceration of the cervix. The mother and child are both well.

*Case II.*—Mrs. M. R., æt. 21 years, consulted me in May, 1878. She had been delivered eight months before of her first child; the labor being tedious, was terminated with the aid of the forceps. The puerperal period was also tedious, and she had ever since been troubled with pain in the hypogastric and lumbar regions, together with a profuse leucorrhœa. Coition was painful, and followed by slight hemorrhage. She was anæmic, and had lost flesh.

*Physical Exploration.*—The perineum was slightly lacerated and the vagina relaxed. The cervix uteri was pressing low down on the pelvic floor, and lacerated bilaterally, but to a greater degree on the left than on the right side. The tissues were soft from engorgement, and the mucous lining of the cervical canal greatly hypertrophied, everted, and abraded of its epithelial covering, so that it bled on the slightest touch. The uterine body was likewise congested and tender. The sound gave a measurement of minus three inches.

I treated this patient locally and constitutionally for almost a year, with marked general improvement, and although the local condition would improve, the benefit was only temporary. On April 30, 1879, I made the operation for lacerated cervix, placing seven silver sutures. Perfect union resulted.

Three months after the operation she became pregnant, and was delivered spontaneously at full term. The labor was so easy that delivery occurred before the arrival of the physician. Two months after the labor she called at my office, at my request, and I found the cervix healthy, although there was a very slight fissure on the left side. She stated that she had been well since the operation.

*Case III.*—Mrs. A. B., æt. 34 years, was sent to me in July, 1880. She had had eight children, the youngest

of which was six months of age. She stated that she always menstruated during lactation, and became pregnant when her children were about eight months old. Since the birth of the last child, she had had metrorrhagia every three weeks, lasting one week, and a profuse leucorrhœa for years. She complained of pain in the lumbar region, with a heavy dragging sensation in the pelvis and on the top of the head. She was emaciated, and so pale that she appeared bloodless. She had become hysterical.

*Touch.*—The perineum and vagina were very much relaxed. The cervix uteri was far back, and presented a nodular surface, the result of three deep rents in its tissue, one of them extending through the centre of the anterior lip, flush with the vaginal junction. There was marked ectropion of the mucous membrane, with abrasion. The body of the uterus was anteverted, and only slightly larger than normal.

I placed this patient upon the "rest treatment" of Dr. S. Weir Mitchell (modified somewhat to suit the circumstances), in addition to the necessary local treatment. Her improvement was very marked, and on October 10, 1880, three months after she first came under my care, I operated for the laceration, and secured immediate union.

Under the date of October 27, 1881, a year from the date of the operation, I find this note in my case-book: "Returns to-day at my request for examination. She has improved so much in appearance that I scarcely knew her, and she states that she has been well since a short time after the operation. The cervix is perfectly normal, and gives no evidence that an operation has been made."

I recently received from my friend, Dr. Wm. L. Taylor, the following note concerning this lady:

"DEAR DOCTOR: In answer to your inquiry regarding Mrs. B., I will state that she was confined six weeks ago. The labor was natural, and if it differed in any way from her former labors, it was more rapid. I examined the cervix to-day, and found the external os patulous, but no laceration."

*Case IV.*—Mrs. X., æt. 35, who had had seven children and two abortions, the last one nine months before, was sent to me in September, 1880. She complained of pain in the lumbar region, a heavy dragging pain in the pelvis, and very difficult and painful locomotion. These symptoms had been growing in severity for several years. She also had menorrhagia and leucorrhœa. *Touch:* Cervix large, soft, and lacerated bilaterally flush with the vagina. Mucous membrane engorged, everted, and eroded. Uterus retroverted but mobile. The sound passed three and a half inches. On February 27, 1881, I closed the rent, placing seven sutures, union immediate. The result on the symptoms was all that could be desired. A letter received a few days ago, in answer to one of inquiry from me, informed me that this lady is now pregnant.

Here are four cases, in which pregnancy followed the operation, out of the class of eight in which impregnation had occurred within five years previous to the restoration of the cervix. And that there will be more I feel sure, because a sufficient time has not yet elapsed since the operation was made, in some of my cases, to prove that sterility will continue.

That sterility does not result as a consequence of the operation, when the proper precautions are taken to secure immediate union and a normal-sized os, does not this analysis prove? That it will prevent a recurrence of abortion, and cure sterility of recent date, Cases I. and II. give undoubted evidence. That it will fail to cure sterility of long standing, for reasons given in this paper, I am convinced from my own experience. Time, however, may prove that a small percentage of this class will also be benefited in this direction.

I have selected the following case from the class of thirteen in which sterility had existed more than five years prior to the operation, as strongly typical of the point I wish to illustrate, viz., that the longer the time which has elapsed between the occurrence of the injury and its repair (pregnancy being absent during this time), the greater and more permanent will be the changes in and about the uterus, which almost necessarily result in a continuance of the sterility after the cervix has been restored.

*Case V.*—Mrs. M. R., æt. 39, consulted me in the fall of 1880. She had had six children, the last one thirteen years before. Her labors were all normal, so far as she knew, except the last. This was complicated by a malposition. The forceps were applied two hours before the delivery of the head, and great traction effort was necessary. The child was so injured by the forceps that it died on the third day after delivery. The patient was unable to be out of bed for nearly three months afterwards, and the bloody lochia continued during two months. She had suffered from menorrhagia ever since, and recently from metrorrhagia every two weeks, at times amounting to "almost a flooding." In the intervals between the hemorrhages, she had a constant and profuse mucous leucorrhœa. She complained of a deep-seated pain in the pelvis, "sawing" in character, with pain in the sacral and lumbar regions and across the shoulders. Coition could not be tolerated because of the pain it induced, and the hemorrhage which resulted.

*Examination.*—The perineum showed an old laceration of slight extent, and within an inch of the vaginal orifice the finger came upon a large mass of tissue which filled and distended the tube. It was hard and nodular around its border, but softer and rather friable in its centre; and it bled on the slightest touch. It gave me, at first, an impression of epithelioma, and I could readily detect that the cervix was bilaterally lacerated down to the vaginal attachment. The body of the uterus was hypertrophied, indurated, retroverted and slightly fixed from contraction of the broad ligaments. Through the speculum the cervix was seen to be lacerated, as the finger had indicated, and that the softer tissue, which occupied the space between the separated lips, was redundant mucous membrane, which seemed to have united from side to side, leaving a very small opening in the centre, corresponding to the external os. This tissue was dotted all over its surface with whitish spots—Nabothian cysts. The sound passed to a depth of minus four inches, and showed the uterine cavity to be rugous—vegetations of the endometrium. I now punctured the retention cysts, and found that the redundant tissue between the torn and separated lips was riddled with them. So much hemorrhage resulted from the scarification that, to check it, I was finally compelled to tampon the vagina. On the next day I removed the tampon, and found the mucous membrane much reduced and less congested.

I treated this lady during a number of months for the purpose of relieving symptoms, and preparing the parts for an operation on the cervix. The hypertrophy and congestion of the mucous membrane of the cervix and uterine cavity were considerably reduced, the metrorrhagia and leucorrhœa diminished. The uterus became more mobile, and tenderness subsided; but the parenchyma of the cervix and body of the uterus remained sclerotic and unreduced in size.

On February 10, 1881, I closed the rent after denuding the surfaces, and dissecting away a large amount of cicatricial tissue from the sides and angles. I placed eleven silver sutures. Considerable difficulty was experienced in passing the needles through the dense and tough cervix, and I broke and bent several

before I succeeded in placing all the stitches. The surfaces did not unite as readily in this instance as is desirable, but union was finally established by granulation, resulting in the formation of a good cervix.

This patient has been entirely relieved of the leucorrhœa and pain of which she complained, but she still has an occasional menorrhagia, and the body of the uterus remains large and hard, the sound entering three and a half inches. As was to be expected under these circumstances, she has remained sterile, but certainly not as a result of the operation.

Dr. Murphy further says: "I fear I shall never arrive at that perfection where it will be given me to appreciate why a laceration of the cervix, by being repaired, will probably prevent cancer of the womb."

I do not wish to discuss this subject here, as I am preparing a special paper upon it, but I would like to say that, if we believe that cancer may develop in consequence of the changes in the circulation and nutrition, which necessarily follow when the cervix is torn, and it seems to me that one need not have arrived at perfection in the art of appreciation to believe that cancer might develop in a field such as was presented in Case IV. previous to the operation, then restoration of the organ ought to prevent cancer.

He also concludes, "That the character of the labor is unusually severe and protracted, and that, in a large percentage, laceration occurs a second time."

That this statement is too sweeping is abundantly proven by the cases I here record. I can believe, where pregnancy has happily followed the operation in a case of long standing, in which the cervix is sclerotic from connective-tissue hyperplasia, and cicatricial from non-occurrence of immediate union, that the first stage of labor might be tedious, and that relaceration might take place. But, suppose relaceration does occur in some cases, is that sufficient reason to deprive the patient of the benefits which usually accrue from the operation independent of pregnancy?

Not long ago I made the operation for the restoration of a lacerated perineum, which extended fully an inch and a half up the recto-vaginal septum, on the person of a lady fifty-one years of age. The laceration occurred twenty-six years before with a severe forceps labor. She had been debarred from the society of her friends, and made loathsome to her husband as well as to herself all these best years of her life. In answer to my inquiry why she had not sought relief long before, she replied that she had done so, but that she had been advised to wait until after the menopause for fear that, in the event of another parturition, the parts would relacerate! Comment on such argument as that is unnecessary.

The comfort which this lady has enjoyed since the rectum and perineum have been restored, causes her to feel far from kindly towards the gentlemen who advised such conservatism.

I have recently delivered two ladies on whom the operation for lacerated perineum was made about three years ago, one by Dr. Goodell, and the other by myself. Relaceration did not occur in either.

DR. GITHENS stated that on June 18, 1878, Dr. A. H. Smith had operated upon Mrs. M., for the restoration of a lacerated cervix; and on July 10th of the same year had performed perineorrhaphy, both operations proving successful. On June 19, 1879, a year and a day after the first operation, he delivered her of a boy at full term, the labor being uncomplicated and easy, and no tear of either cervix or perineum occurring.

DR. E. E. MONTGOMERY remarked that as regards the question of sterility resulting as a consequence of the restoration of a lacerated cervix, he had been operating since 1879, and five of the patients he had op-



erated upon have since become pregnant. The first patient upon whom he operated became pregnant lately, but aborted; as she had desired not to become pregnant, and was anxious that an abortion should occur, he believed that it had been artificially induced. Another patient, operated upon in 1880, had been delivered in January, 1883, without accident. A patient operated upon in 1879 is now four months advanced in pregnancy; before the operation she had aborted at three months; this accident was apparently consequent upon the existence of the laceration. Of these five cases, two were lacerations of long standing, and three were recent.

DR. CLEEMANN had operated upon one case of nine years' standing. During the first two years of that time she had two miscarriages, and then remained sterile for seven years. The operation was performed eleven months ago, and she is now two months advanced in pregnancy.

DR. A. H. SMITH had heard Dr. Baer's paper with pleasure. The general impression in this city is that sterility is a consequence of the injury, and a large proportion of the cases operated on by him have become pregnant after operation. The fear of the recurrence of the accident prevents pregnancy in many cases, as means are used to avoid that condition. Improved general health and local comfort are a result in a majority of the cases, even where pregnancy does not occur. He would like to hear Dr. Baer's experience about the existence of obstinate nausea in pregnancies after operation upon long-standing cases, accompanied with an enlarged and hardened condition of the cervix. It has been so with him. As regards the result of labor, there has been no tendency to re-laceration in the same position. He used inhalations of chloroform and hot-water douches in such cases, and does not rupture the membranes early; he also prevents the patient from bearing down, and by these means secures a slow and safe labor. He is sorry to hear that Dr. Baer has no confidence in the power of the operation to reduce the size of a hyperplastic uterus. He has seen cases of the so-called sub-involutus uterus, after the complete failure of local means, such as iodine, silver nitrate, etc., reduced to one-third of its bulk by operating upon a laceration of the cervix. The rapidity with which the ultimate result of reduction in size is reached is in proportion to the time that has elapsed since the injury.

When the cervix is much hypertrophied, and ectropion exists, such a cervix as would formerly have been called cancerous and would have been amputated, the stitches should be left in a long time. If they are removed too soon there is a proneness to gaping, a sort of ectropion or sprouting. This will not happen if the sutures are allowed to remain thirty or forty days.

DR. WM. GOODELL regretted that he was too late to hear Dr. Baer's paper. With reference to the question of the influence of the operation on causing sterility, he thinks it does have such an influence. He has operated in one hundred and sixty-nine cases, and has only known of seven who have since become pregnant. There were probably more, as the cases have passed away from his knowledge and he has never heard of them again, as he does not practise obstetrics outside of the Preston Retreat. In two of the seven cases, a second operation was required, but it was slight. In one case not the slightest change occurred in the form of the os. As regards the effect of the operation in preventing cancer, he believes it fully, both from experience and from *a priori* reasoning. He has seen but two cases of epithelial cancer in women who have not borne children. In fact his experience has been that the greater number of children, the greater the liability to carcinomatous degeneration, and often the

notch of a previous laceration is seen in the cancer. If carcinoma is, as we believe, a local disease at its beginning, what more probable cause could we have than such an irritating sore as a bad laceration of the cervix. In more than one case his principal reason for operating for the restoration of the cervix has been on account of a history of cancer in the family.

Concerning the effect of the operation upon hyperplasia, he believed, with both Dr. Smith and Dr. Baer. There is an element of passive congestion, the result of the irritation of the laceration; and when the cause is removed by the operation, the effect passes away, and the size and weight of the uterus are much decreased. He believes that preliminary treatment in cases of enlargement with ectropion has a very great effect upon the results of the operation. Applications of iodine, glycerine, and tannin, and the use of the very hot douche, and cross-hatching of the enlarged Nabothian glands, have a softening and calming effect. In such cases, if the hard, gristly triangle in the apex of the wound be carefully excised, the tension on the stitches is slight. He generally removes the sutures in about nine days after the operation; in one case, in consequence of circumstances affecting convenience, they were allowed to remain three weeks. When he can secure easy approximation and close coaptation, which is readily done by means of his guiding thread, perfect union is more probable than in any other plastic operation. For his sutures, he uses the finest possible silver wire; it is drawn to order.

As regards the results of the operation on various symptoms that were supposed to arise from the presence of the injury, he has experienced the greatest success and great disappointments. In some, local treatment would have answered every purpose.

DR. A. H. SMITH knows well the value of preliminary treatment and employs it faithfully, but there is a limit to the endurance of a patient; she cannot be kept too long upon her back, and it sometimes becomes necessary to operate before all that is possible has been accomplished. In some cases there is an unavoidable tension, and in others a friable condition of the tissue which is benefited by leaving the stitches in position. He allows the patient to attend to her domestic duties with the sutures *in situ*. In his experience there has been no relation between the number of children and the tendency to carcinomatous degeneration. Such growths have been in women who have had but one or two children only. Cancer of the mammary gland is most common in sterile women or when children have been few. He has rarely seen cancer in its early stages in an enlarged cervix with ectropion, but on the contrary in unnaturally small cervixes.

DR. WHARTON SINKLER has three patients who have been operated upon for lacerated cervix, one of them by Dr. Goodell. All of them have since become pregnant.

DR. MONTGOMERY remarked that one-sixth of the cases he had operated upon (within four years) had since become pregnant. He thinks Dr. Smith's suggestion an over-true one. As the injury was the result of pregnancy, the risk must not be run again. In the Philadelphia Hospital he has found cancer of the uterus most common after numerous labors. The same rule has held good in mammary cancer. It has been most common after frequent nursing. Uterine hyperplasia is reduced by operating on the torn cervix. He has operated with this result in view in cases of so-called subinvolution. It has been recommended to divide the cervix, and remove a wedge-shaped piece, reuniting the wound, as a remedy for this condition.

DR. H. BEATES has performed twenty-three operations, and has had two pregnancies since. He has had under his care seven cases of uterine carcinoma,

and in all of them cervical laceration coexisted. The number of children varied from one to several.

DR. BAER, in closing the discussion, remarked that in answer to a letter of inquiry to the husband of a patient upon whom he had operated to restore the cervix, he received one in which the idea of another pregnancy was scouted with disdain. This is doubtless a more or less general feeling. Patients have not complained particularly of nausea in subsequent pregnancies. Hyperplasia in cases of long standing where the muscular tissue has been replaced by fibrous tissue have remained large, very little or no absorption having been effected. New cases were more benefited where the uterus was more muscular in its composition and the enlargement was due to engorgement.

Sutures were removed in from eight to twelve days; he was afraid to leave them longer on account of fear of irritation and their cutting out. It might be good to leave them longer if a seton effect were desired.

#### NEW YORK SURGICAL SOCIETY.

*Stated Meeting January 23, 1883.*

DR. F. LANGE presented a specimen of

##### DERMOID CYST OF THE RIGHT OVARY,

removed from a patient thirty years of age. It contained a large mass of hair and some bone. One portion presented an appearance almost exactly like a piece of the scalp, and it was from this part that the hair took its origin. There had been a variety of opinions with reference to the nature of the tumor, but for the most part it was regarded as a solid growth, and in close connection with the uterus. At the time he saw the patient it had become quite clearly established that the tumor contained considerable fluid, and that probably the uterus had been entirely crowded to the left side, and that the growth did not have its origin in that organ. It seemed by internal examination that the tumor was situated in the broad ligament. The operation was very difficult in consequence of the absence of a pedicle, and the presence of extensive adhesions. Many ligatures were applied to the adhesions, which were cut in each instance by the actual cautery, and the wounds were powdered with iodoform. Although the operation lasted two hours, the loss of blood was insignificant. The left ovary was also removed, on account of cystic degeneration. It was of about the size of a small hen's egg. Scarcely any reaction followed the operation; at no time did the temperature rise above the normal. He thought that the patient was out of danger. The operation had been performed eight days. It was the second dermoid cyst which he had removed within the last three months. The former was from a girl nineteen years of age. [At the time of this note the patient is out of bed and danger.]

##### STRAIGHT URETHRAL SOUNDS.

DR. POST presented several samples of straight steel sounds for treating strictures in the straight portion of the urethra. The advantage claimed for them was that they could be used with greater facility than the curved instruments, and that when given a rotary motion they caused less pain. One was fusiform in shape. They measured twenty-five centimetres in length, twenty-seven millimetres in circumference round the bulb, thirty-four millimetres at a distance of seven centimetres from the bulb, and thirty millimetres twelve centimetres from the handle.

##### A SUBSTITUTE FOR THE TRACHEOTOMY TUBE.

DR. L. A. STIMSON said that since the last meeting of the Society, at which Dr. McBurney read a paper

on tracheotomy as a preliminary operation, he had had a patient under his care with a tumor of the superior maxilla, and it had occurred to him that possibly a substitute could be devised for the tracheotomy tube, consisting in a tube to be introduced through the mouth into the pharynx, the space around it to be blocked with sponges in a manner which would prevent the passage of blood into the pharynx, air passages, or oesophagus. After talking the matter over with Dr. McBurney, who had conceived the same plan independently, and following Dr. McBurney's suggestion with reference to details, an apparatus was constructed which consisted of a tube six or seven inches in length, and the diameter of a No. 38 urethral sound, about an inch and a half of its extremity curved to almost a quarter of a circle, and provided with a flange one-eighth of an inch in breadth, perforated with small openings through which threads could be passed. About that curved portion he tied a sponge, stitching it fast to the flange and placing behind it a piece of impervious tissue, in order to favor the retention of such blood as might soak through the sponge. After complete anæsthesia had been produced in the usual manner, the tube was passed into the mouth and carried well down behind the root of the tongue, but it caused so much gagging that it was necessary to withdraw it until it reached only a little behind the uvula, so that the patient still breathed partly through the nose. While the preliminary incision was being made and the flaps directed up, sponges were placed between the teeth, and the packing proved very satisfactory indeed. The patient was able to breathe; anæsthesia was maintained without difficulty through this tube, and although he bled very freely the sponges caught all the blood, and it was only necessary to change them as soon as filled. After the flaps had been dissected and bleeding points secured, the hemorrhage was inconsiderable. During the piecemeal removal of the growth, which included all the right and a portion of the left superior maxilla, and left a cavity which opened into both nostrils and backwards into the pharynx above the soft palate, there was no trouble whatever from the bleeding. Sponges were kept behind the surface of section and caught all the blood. The tumor was an ordinary carcinoma, and the only point concerning it which was remarkable was the fact that it had so affected the gum corresponding to it that a small fragment snipped off for microscopical examination presented all the appearance of epithelioma, even to the completely formed nests of cells. This appearance of epithelioma was due to secondary change of the papillary layer of the gum. The true tumor itself was an alveolar cancer, which had evidently originated farther back and in the substance of the bone.

Dr. Stimson said that he was aware that tubes had been devised to pass into the trachea, but that was not the intention in his apparatus. It was his intention that it should not pass beyond the pharynx. The suggestion was so simple that he thought it must have been acted upon by others, and he had shown the instrument to the Society in the hope that further trials might be made with it which would increase its efficiency.

##### NECROSIS OF A COSTAL CARTILAGE.

DR. J. C. HUTCHISON presented a portion of the cartilage of the eighth rib, removed from a man fifty years of age, who two years previously had typhoid fever which lasted for a considerable time. Six months later he had two abscesses over the cartilage of the rib, one at the junction of the cartilage with the rib, and the other where the cartilage joined the sternum. A probe reached the cartilage very readily, and during the last

two months he had been able to push the probe apparently into the cartilage. Lately the patient had suffered considerable pain, especially upon coughing, and Dr. Hutchison determined to remove the diseased portion; which he did by making an incision directly over the cartilage. The perichondrium was separated from the cartilage, and a chain saw carried about it, near the point where it joined the rib, very readily, and he subsequently discovered that there was separation at that point. The cartilage at the point where it joined the sternum was easily snapped off. On examination he found that the disease was confined to the anterior portion of the cartilage. He however removed the portion which remained, so that the entire cartilage was removed. The end of the rib was perfectly healthy. The case was the only one which had fallen under his observation of disease of cartilage of the rib.

#### NEURALGIA OF THE INFERIOR DENTAL NERVE FOLLOWING FRACTURE OF THE LOWER JAW.

DR. STIMSON narrated a case in which the patient, after the lapse of seven months, suffered from neuralgia following fracture of the lower jaw. The fracture was on the left side, and united with some displacement. The patient returned to him in December, complaining of numbness and sensitiveness in the region of the cutaneous distribution of the inferior dental nerve, and also of inability to properly masticate, because of displacement of the jaw. Dr. Stimson found that the difficulty in mastication was due to depression of the anterior fragment, and he relieved it by gouging away a portion of the posterior fragment which interfered with an upper molar. The union between the fragments was fibrous, and a temporary increase of the slight mobility followed the operation. The pain increased afterward to such an extent, although it was temporarily relieved by the use of an interdental splint, that the patient returned, and demanded some operation for her relief; pain upon pressure over the mental foramen was acute, and also along the course of the inferior dental nerve before its entrance into the canal. He exposed the nerve before its entrance into the canal by the usual incision within the mouth, and raised it up and divided it. He desired to exsect a portion, but was unable to hold it with the forceps so as to remove a portion. Relief was immediate and complete for perhaps ten days, but sensitiveness then again began to return in the region of the nerve, just where she formerly complained of it when the mental foramen was pressed upon.

DR. HALSTEAD referred to a case in which he excised about one centimetre from the inferior dental nerve. The neuralgia was severe, but relief was given; he found exsection of a portion of the nerve very difficult to perform.

DR. STIMSON referred to a case in which Dr. Sabine had divided the inferior dental nerve for the relief of neuralgia, and in which Dr. McBurney subsequently removed a portion of the nerve. The excision was followed by a cure which existed for one year.

DR. HUTCHISON referred to two instances in which he succeeded in curing obstinate neuralgia by ligature of the carotid artery.

DR. LANGE referred to a case already reported to the Society, in which the patient had had a variety of operations performed, with a varying amount of relief, but permanent relief had not yet been obtained.

DR. STIMSON remarked that the traumatic origin of the neuralgia in his case, seemed to him to be sufficient to justify the division of the nerve above the point of irritation.

## NEW INVENTIONS.

### A MODIFICATION OF JARVIS'S ÉCRASEUR, AND AN INSTRUMENT FOR REMOVING NASAL POLYPI.

BY FRANCKE H. BOSWORTH, M.D.,

OF NEW YORK.

IN the report of a paper on "Tumors in the Nasal Passages," read before the New York Academy of Medicine on January 4th (see THE MEDICAL NEWS, January 13, 1883), reference was made to two new instruments, the illustrations of which are herewith presented.

Fig. 1 represents a modification of Jarvis's snare écraseur, by which it can be used in the vault of the pharynx for the removal of adenoid growths, fibromas, and other neoplasms. It is to be fitted with No. 5 steel

FIG. 1.

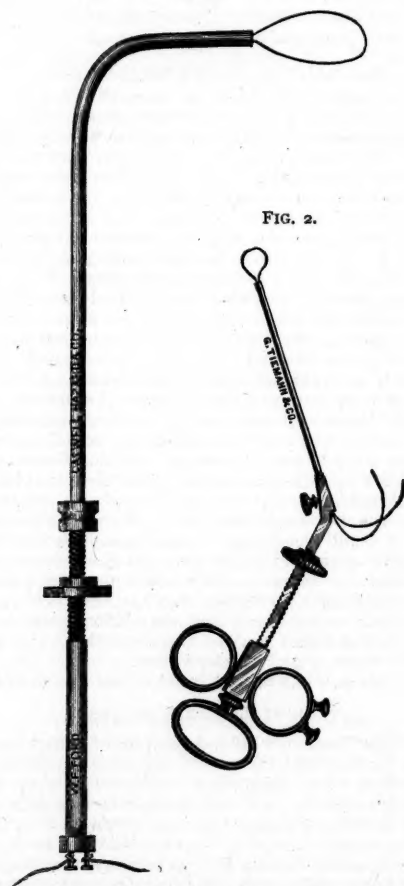


FIG. 2.

piano wire, the loop being prepared of such a size as an ocular inspection of the growth shows will easily embrace its circumference. The loop should be first bent backward from the handle, and to a right angle with the orifice of the tube. The wire is then played out about an eighth of an inch, and the wire again bent sharply toward the hand, and to a right angle.



In this position the loop can easily be passed behind the palate and to the pharyngeal vault. The action of the kinks given the wire will now be seen. As the hoop is drawn into the tube by the screw, it is thrown sharply and firmly back against the growth, and made to embrace it, while at the same time it engages the mass and severs it. The steel wire is so firm and resisting that it can be thrown with considerable force against even a broadly sessile growth, and made to engage it. I have used this device in a very large number of adenoids, as well as in fibroid and sarcomatous tumors, with such unvarying good results, that I regard it as by far the most satisfactory instrument in use for operating in the pharyngeal vault.

Fig. 2 is an instrument for use in removing nasal polypi. The Wilde snare in its day was the most thoroughly surgical instrument for operating upon these growths in use. The snare, however, merely embraces the pedicle of a polypus and wrenches it out by evulsion. The principle involved in the *écraseur* is that the pedicle is embraced and severed by *écrasement*. In this procedure the whole growth is removed, and at the same time some of the connective tissue fibres are drawn out from the mucous membrane; thus no polyp tissue remains from which a new growth may develop. In Jarvis's instrument—being straight—the hand interferes with inspection in such a manner as to hamper the manipulation. The instrument shown is a combination of the *écraseur* principle with that of the snare; a modification of Jarvis's and Wilde's instruments, in which the manipulation of the loop is entirely under ocular inspection during the operation.

## CORRESPONDENCE.

### THE EXPLANATION OF THE NEW YORK CODE.

*To the Editor of THE MEDICAL NEWS.*

SIR: I assume (perhaps erroneously) that you would not intentionally misrepresent the New York State Medical Society, that you might misconstrue, or be misinformed, but not willingly misrepresent; and therefore send you the thoughts which prevailed in that Society, and determined its action upon the question of the Code of 1882.

The people, through the Acts of 1806, 1857, and 1865, and their various amendments, announce, that they now have, and forever reserve to themselves, the right to declare, who shall exercise the rights and privileges of physicians in this State.

The Medical Society of the State of New York reaffirms the declaration of the Code of 1882, that the official formula of the official Society of the medical profession should accord with the laws of the State, the will of the people, the law-making power.

The Code of 1882 says that it is unwise for the medical profession of the State of New York, to attempt to misstate or misrepresent any portion of the medical law of the State, by which that profession is governed, and therefore does not attempt to deprive members of the profession of 1857 and 1865, of their rights as physicians.

We say that the people have said that those men are physicians, and we say nothing more. We endorse no societies, we endorse no men, no practices, and no doctrines. We simply maintain our right to give our advice whenever and wherever the people want it.

The American Medical Association asks us to make war upon the State of New York, and our Society votes that it has no relish for such an enterprise.

The above were the prevailing sentiments of the recent meeting, and by comparing them with your

editorial in *THE NEWS* of the 10th inst., you can easily see how fairly you represent the situation.

Sincerely yours,

H. R. HOPKINS.

BUFFALO, Feb. 13, 1883.

[We thank our correspondent for his courtesy in parenthesis, but being still not in his mental attitude on this subject, must risk further charges of misrepresentation. Some new line of argument was needed on his side of this movement, and this one is new. Were the statements upon which it is based, and which are given as facts, somewhat nearer to being facts, the argument would have more force. When the real facts are better considered by our correspondent, he may find that his charges of misconstruction apply better to himself.]

The Acts of 1806, 1857, and 1865, and their various amendments, were not made by the people, nor at the suggestion of the people, but by the petition of the bodies whose interests they represent, for the regulation and incorporation of these bodies, and for the welfare of the people through the suppression of irregular practice and quackery, and to invoke them now in support of a levelling affiliation is to misconstrue them, because it reverses their original purpose and intent. They are all laws of the people, deriving their powers from the people for the good of the people. But they originated not with the people but in the bodies they incorporate, and, as they one after the other traverse each other, as far as the good of the people is involved, they are inoperative, excepting, perhaps, the original one, which, though emasculated, was never repealed. This law of 1806, "for the purpose of regulating the practice of Physic and Surgery," incorporated the medical profession of the State "to contribute to the diffusion of true science," and hence it was for the regular profession.

The law of 1857 was "To incorporate Homœopathic Medical Societies," and that of 1865 was for the incorporation of Eclectic Medical Societies, and nothing is said in either of these two simple acts of incorporation about the purposes for which they were incorporated, but they are based upon the original law of 1806, and have "All the powers, privileges, and immunities now conferred by law upon the State Medical Society," and county medical societies. The purpose, so far as the welfare of the people is concerned, is the same in all three, namely, to suppress irregular practice or quackery through the incorporate existence of "true science." Therefore, as to each one the other two became irregular, or are based on untrue science—that is, quackery—and, as each one contradicts the other two, two must be void, for the people cannot enact laws to their own hurt, and the powers granted reside only in the first or original law.

Now, if the Code of 1882 attempts to harmonize these three conflicting laws by bringing into force the two inoperative ones, it is equally objectionable from the standpoint of any one of the three, and its action is impossible from the standpoint of greatest good to the people as the law-making power. Beside, the people have not said that all "those men are physicians." They have said, in the first law of 1806, that *these* are physicians, and constitute the profession, and are to be regulated for specific purposes as stated; but the others are simply incorporated for purposes not stated, but with the powers and rights of other corporations.

When the advocates of this no-code movement say they endorse no societies, no men, no practices, no doctrines, this can only be true in the sense that by demolishing all differences that have hitherto existed between societies, men, practices, and doctrines, they

really endorse all. What the progress of truth has differentiated from error, they destroy, and substitute a communism; and this, like all other communistic license, is done in the name of "liberty" and "the people."

The American Medical Association has not asked "us" to make war upon the State of New York, even by implication, for it has asked nothing at all. It is a voluntary association, like all others would soon have to be if official legal existence was permitted to dragoon them into unwholesome and incompatible fellowship, and as a voluntary association it simply declined an incompatible fellowship; therefore, the votes of "no relish" were rather irrelevant.

As the line of argument of our correspondent was not reported from the late meeting of his State Society, we are at a loss to know how he ascertained that it was the prevailing sentiment. We hope he may be mistaken.—ED.]

#### THE ETIOLOGY OF SWINE PLAGUE.

(*Infectious pneumo-enteritis of the pig, Klein; le rougelet ou mal rouge des porcs, Pasteur.*)

To the Editor of THE MEDICAL NEWS.

SIR: In a recent communication<sup>1</sup> (December 4, 1882) to the French Academy, Pasteur gives the following summary of results obtained in an experimental research relating to the above-mentioned disease:

"I. Swine plague (*mal rouge des porcs*) is produced by a special *microbe*, which is easily cultivated outside of the body of the animal. It is so minute that it may easily escape observation, even the most attentive. It most nearly resembles the *microbe* of fowl cholera, its form being that of the figure 8. But it is smaller and less easily seen, and differs essentially from the *microbe* of fowl cholera in its physiological properties. It has no action upon fowls, but kills rabbits and sheep.

"II. When inoculated in a pure condition into pigs, in quantities almost inappreciable, it promptly gives rise to the disease and to death, the symptoms being the same as in spontaneous cases. It is especially fatal to the white race (improved breed, most highly valued by those who raise pigs).

"III. In 1878 Dr. Klein, of London, published an elaborate research upon this disease,<sup>2</sup> which he calls infectious pneumo-enteritis of the pig; but this author has been entirely mistaken as to the nature and properties of the parasite. He has described a bacillus with spores as the *microbe* of this disease, which he describes as being even larger than *Bacillus anthracis* (*la bactérienne du charbon*). This is very different from the true *microbe* of swine plague, and has no relation to the etiology of the disease.

"IV. After assuring ourselves, by direct proof, that the disease does not recur, we have succeeded in inoculating it in a mild form, and the animal has subsequently proved to be protected against the malignant form of the disease."

Néguin<sup>3</sup> and Salmon<sup>4</sup> had previously reported their failure to find the bacillus of Klein in the blood and other infectious fluids obtained from animals sick with this disease, and the constant presence of a minute micrococcus apparently identical with that described by Pasteur.

The experimental study of the last-named writer is an admirable one, and would doubtless have attracted more attention, both at home and abroad, if the work had been done anywhere else than in America. "Can

any good thing come out of Nazareth?" I have seen no reference to this work in the medical journals, although the original research of Dr. Klein was extensively noticed, and was considered by many as establishing the parasitic nature of the disease in question. This deduction is sustained by Pasteur's investigations, but there can be little doubt that Klein overlooked the real parasite, and that his bacillus was developed *post-mortem*, and had nothing to do with the virulent properties of the fluids in which it was found.

Dr. Salmon says: "Virus sent me by Dr. Detmers in a liquid form still contained many such *bacilli* as he has described, and also a considerable number of both oval and spherical particles, which I considered as bacteria spores. But inoculation proved that this liquid was no longer a virus, that it had lost its activity by putrefaction, though the septic rods supposed to be peculiar to the virus were still retained and by their movement demonstrated their vitality. Again, cotton saturated with pleural effusion and dried by the same gentleman, was placed in a clean beaker and moistened with distilled water; in less than an hour this water swarmed with *bacilli*."

In warm weather putrefactive organisms develop with astonishing rapidity in the blood and tissues of animals dead from any acute infectious disease. These organisms are constantly present in the intestine of healthy animals in vast numbers, and it may be that in these diseases, owing to the very slight vital resistance offered in the last moments of life by the mucous membrane of the intestine, to the dilatation of its capillary bloodvessels, and to loss of its epithelium, putrefactive bacteria find their way into the almost stagnant blood in the mesenteric veins, and even into the general circulation before life is extinct.

Be this as it may, the rapid *post-mortem* development of these organisms after death from any septic disease cannot be questioned; and one who undertakes to pursue etiological investigations is likely to be misled, notwithstanding that he may be an accomplished pathologist and a skilful microscopist, unless he resorts to methods which enable him to exclude with certainty this source of error, as well as that arising from the presence in the atmosphere of the germs of these same organisms.

Dr. Salmon has given an account of his method of collecting blood from the veins of an animal just killed, in hermetically sealed and sterilized—by heat—glass tubes. (*Loc. cit.*, p. 396.)

The method seems to the writer to be entirely trustworthy, and the record of experiments made inspires confidence in the scientific accuracy of the observer.

Blood drawn from the veins of a pig affected with swine plague, into these "capillary vacuum tubes" was quite free from bacilli at the end of ten days. But this blood swarmed with micrococci, single, in pairs (Pasteur's figure 8), in chains, and in zoöglæa masses.

Healthy pigs inoculated with this blood sickened at the end of seven days and exhibited the characteristic symptoms of the disease. These inoculations did not, however, produce a fatal form of the malady, and Dr. Salmon found it "impossible to carry the virus beyond a second generation, even by inoculating pigs which had never before been exposed to the contagium.

Inoculations with cultivated virus, containing the micrococcus in abundance, produced a discoloration of the skin, and a slight eruption; but the symptoms were not sufficiently definite to enable the experimenter to say with certainty that the inoculated animals suffered a mild attack of the disease.

It is to be hoped that the Agricultural Department will continue to foster experimental studies of this kind and that Dr. Salmon may have further opportunities for the study of this and other infectious diseases

<sup>1</sup> Comptes rendus, t. xciv. p. 1120.

<sup>2</sup> Quart. Jour. Microscop. Science, April, 1878.

<sup>3</sup> Recueil de Méd. Vét., 1880, pp. 36 and 37.

<sup>4</sup> Annual Report Department of Agriculture, 1880.

among our domestic animals. No doubt liberal appropriations can be obtained for this purpose on account of pecuniary losses which our agricultural voters suffer from these diseases.

Respectfully,

GEORGE M. STERNBERG, M.D.,  
Surgeon, U. S. Army.

FORT MASON, SAN FRANCISCO, January, 19, 1883.

#### THE EFFICACY OF CARBOLIC ACID IN ODONTALGIA.

To the Editor of THE MEDICAL NEWS.

SIR: Feeling it to be the duty as well as the privilege of every physician to make known to the profession the utility of any agent which he may have found beneficial in relieving pain or curing disease, I send you my experience in relation to carbolic acid as a remedy for toothache arising from caries.

About three months since I was distracted with toothache for about twenty hours, during which time I tried all the known remedies, but in vain. At last it occurred to me to try pure carbolic acid, and although at first I felt a little diffident, having never heard of its use in this way before, I applied it, and to my great relief and agreeable surprise, the pain ceased instantly, and did not return.

Having to deal with a large number of the poor in my dispensary practice, I have rejoiced in being able to afford similar relief to many sufferers. One poor woman, in an advanced state of pregnancy, had not enjoyed a night's rest for nearly two months; but after a little patient application I was able to send her away rejoicing, and I have not heard of the tooth troubling her again.

Desiring that others may share in the luxury of *doing good* in this way, as well as receiving relief, I append the *modus operandi* adopted.

1st. Clean out and dry, by means of absorbent cotton, the cavity of the tooth.

2d. Apply the acid thoroughly in the following manner: Take a piece of wood, according to the size of the cavity (a toothpick or a match will do), and dip the end into carbolic acid—*full strength*; should the hole be very large, a very small portion of cotton may be twisted around the end of the piece of wood. Care is required not to touch the surrounding tissues. It is scarcely needful to add that the acid crystals only need to be warmed to render them soluble.

The foregoing applies especially to odontalgia cariosa, and to odontitis; but it will also prove serviceable where the fangs of the tooth are affected, especially if they are accessibly exposed. I am, dear sir,

Yours respectfully,

GEORGE D. DOWKONTT, M.D.,  
Med. Supt. N. Y. Medical Mission.

#### NEWS ITEMS.

WASHINGTON.

(From our Special Correspondent.)

AMERICAN PUBLIC HEALTH ASSOCIATION.—On Friday, February 16, the Executive Committee of the American Public Health Association met at the Naval Museum of Hygiene, in Washington, D. C. It was decided that the principal topics for discussion at the next meeting of the Association should be—1. The best methods of collecting and publishing vital statistics. 2. The etiology of malaria. 3. Food preservation and adulteration; and, 4. the physics of house drainage. The next meeting of the Association is to be at Detroit, and the time fixed by the Committee is

the second week in November, which seems rather late in the season for that locality.

TROY, N. Y.

(From our Special Correspondent.)

THE RENSSELAER COUNTY MEDICAL SOCIETY AND THE NEW CODE.—At the stated meeting of the Rensselaer County (N. Y.) Medical Society, held on February 13th, the Society voted to stand by the Code of the American Medical Association and elected delegates to the Association. The County Society thus takes open issue with the State Society.

CHICAGO.

(From our Special Correspondent.)

THE CHICAGO TRAINING SCHOOL FOR NURSES has issued its second annual report, showing a satisfactory progress. The school began in 1881, has now twenty-three admitted pupils, and eight on probation, employed in seven wards of the Cook County Hospital. The staff of the hospital expresses its full satisfaction with the conduct of the nurses. The institution is soon to have its own home in a building now in the course of erection in the vicinity of the hospital.

FLORIDA.

(From our Special Correspondent.)

THE YELLOW FEVER AT PENSACOLA.—An epidemic of yellow fever prevailed in Pensacola and vicinity during the summer and autumn, 1882, about 2,400 cases of the disease, with nearly 200 deaths, being recorded within the 86 days of the scourge.

The naval reservation, containing some 1,600 acres, is situated on Pensacola Bay, about four miles to the southwest of the city. It had a population of some 1,700 people during the fall, and although the disease spread through the surrounding country, so as to include the station named, not a case of the fever appeared within its limits, owing to non-intercourse—an armed picket-line keeping out all persons from August 28th until November 23d, when frost came to the relief of all concerned.

Upon the official announcement—August 28th—that yellow fever existed in Pensacola, the unacclimated officers, with two exceptions, and all their families, as well as the marines, left the yard for other parts, agreeably to the recommendation of the senior medical officer of the station. As the marine guard consisted in the main of recruits enlisted at the north, and who were not even inured to a soldier's life, it was judged prudent not to place them on picket duty. Moreover, from experience gained in past epidemics of the said fever at this station, as recorded in official and other reports, it is known that the marines were among the first to be seized by the disease. At all events, it was thought wise to get rid of this element of danger at the outset.

The employes of the yard, numbering about eighty men, all acclimated, were immediately organized into a cordon, and placed around the entire reservation, with orders to permit none to enter the lines, upon any pretext. The said line was over four miles in extent, more than half being water-front, and thus easily guarded. At first these sentinels were without any shelter, save what could be obtained from hastily improvised structures of bushes, and there was, necessarily, some irregularity relative to their reliefs. But in a few days A tents were pitched along the lines, and a swath some thirty feet wide was cut through the woods and thickets, to give an unobstructed view, as well as a clear beat. The roads for the most part



were blockaded by abatis, to prevent thoroughfare. A part of the regular watchmen of the station were encamped on the road communicating with Pensacola at the extreme northeasternmost extremity of the reserve, and here the incoming mails were fumigated, and the outgoing bags delivered.

On the 16th September, by request, the citizens of the reservation volunteered to come to the aid of the naval authorities, to help maintain the cordon; and to this end all the males above the age of sixteen years were enrolled for picket duty, to the number of about four hundred. No one was excused from this service, unless some physical disability prevented locomotion. All officers had to stand guard, or pay a substitute, no exceptions being made.

The posts were systematically numbered. Each day, those whose turns of duty had come were notified of the fact, and two men were told off for each post. These pickets were allowed to arrange to suit their own convenience as to how they would stand their twenty-four hours' guard. All the sentinels were visited at stated times, day and night, by officials appointed for this work. As all the guards had interests at stake, in protecting their families and friends from the enemy, no great trouble was experienced in keeping the men up to the work. However, when the disease began to spread in the neighborhood of the lines, there were some annoyances and difficulties in maintaining the quarantine inviolate, as a part of those who had taken refuge in the immediate vicinity when the malady was first made known as in Pensacola, now desired to return to their homes on the reserve, for greater safety. Of course, this could not be permitted; and thus a conflict of interests arose. But the quarantine was held, in spite of all the attempts to break it.

As the station was thus effectually closed against the surrounding country, and in its turn was cut off from all the world—save by sea—the only avenue by which to obtain provisions was from Mobile, some seventy miles distant. Upon several occasions, the board of health of that city, upon receiving a certificate from the surgeon of the naval reservation that there was and had been no case of yellow fever, and no symptoms of any contagious or infectious disease within the cordon, and that a rigid quarantine was maintained against Pensacola and vicinity, permitted a steamer to visit the station, for the sole purpose of supplying provisions. Had the said authorities refused to grant this boon, the quarantine could not have been kept up, as the inhabitants would have been starved out early in the fall.

Three times during the blockade rumors circulated that the malady had appeared among the pickets and others, but happily such was not the fact, congestive remittent fever being the disease which gave rise to these reports and the attending uneasiness. It may be stated that the epidemic, as it existed in Pensacola, was by no means the mild type, as is generally supposed by those who know of it merely by reading the daily or common reports. In point of fact, the opposite is the truth; the statistics, as now published, to the contrary notwithstanding. From Aug. 10th, the date of the first appearance of the fever in Pensacola, until August 28th, inclusive, when the disease was officially made known, and the city was shut out from the rest of the country, a large portion of the unacclimated populace made its escape, with or without the advice of the board of health.

Now, of the stated 2,400 cases, fully one-half were among the colored residents, of whom only one per cent. died. Of the white inhabitants, many of whom were Germans and Italians, too poor to get away, a majority were seized with the disease. It is safe to say that, with very few exceptions, all those unprotected

by a former attack of the affection, suffered its presence personally. Of those who had had the fever, and were attacked again, all recovered. With the Germans the percentage of mortality was over seventy, and among the Italians it was a little less. The newcomers, in general, suffered to the extent of over forty-five per cent. From the fact that the colored population was so generally taken with the fever, it is judged by competent authorities present that the type of the disease was malignant.

It is quite evident, to those who have studied the history of the epidemic, that the malady was brought to Pensacola by infected shipping, through the lazaretto of the city. It is thought that the precise way it reached the shore there can be given positively, with all the dates and figures necessary to convince all interested of the fact. And it is believed there that, with a proper quarantine, yellow fever will no longer be the bugbear of that beautiful bay.

#### WINNIPEG, MANITOBA.

(From our Special Correspondent.)

THE medical men of this city have organized a medico-surgical society with Dr. Lynch *President*, Drs. Whiteford and Codd *Vice-presidents*, Dr. Covernton *Secretary*, Council, Drs. O'Donnell, Patterson, Jack, Brett, Philip, and Kerr.

#### JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

—The Board of Trustees held a meeting in Chicago, on January 17. A majority of the members were present, and communications relating to the more important questions to be discussed were received from all the members not present. After a full examination of the whole subject, it was unanimously decided to report to the next meeting of the Association in favor of the establishment of the proposed journal. Steps were also taken to have all the preliminary arrangements so far matured that the first issue of the journal could be made within thirty days after the next meeting, provided the Association should adopt the recommendation of the Board. While the members of the Board were satisfied that the present number of returned pledges afforded a safe basis on which the Association might commence to publish the journal, they deemed it very desirable that more should be added to the list before the time for making their report, that there might be no reason for doubt or hesitation on the part of the Association when it should be called upon to take final action on the subject.

THE APPROPRIATION FOR THE PREVENTION OF THE SPREAD OF EPIDEMIC DISEASES.—The Sundry Civil Bill as reported to the House contains a clause appropriating \$100,000 in aid of State and local Boards of Health in preventing the spread of epidemic diseases. Mr. Manning offered an amendment providing that the money shall be expended under the supervision of the National Board of Health. Mr. Ellis, of Louisiana, in opposing the amendment expressed his opinion that the National Board of Health was the most stupendous humbug and fraud ever created, and quoted from its own report to show that it had made misexpenditures of the public money. He could bring home to that Board a deliberate attempt to create rumors of yellow fever in New Orleans.

Mr. Dunn, of Arkansas, advocated the amendment, and declared that the Louisiana State Board of Health concealed the existence of pestilence in New Orleans, and was willing to peddle death through the country in order to keep up the commerce of the State. Mr. Manning defended the National Board of Health from

adverse criticism, and reflected upon the Louisiana State Board, attributing to it in great measure the yellow fever epidemic of 1878. After further discussion the amendment was lost.

**THE NAVAL MEDICAL SOCIETY.**—The officers of the Medical Corps of the United States Navy, have formed a Medical Society, which will hold meetings on the first Thursday of every month in Washington.

At the annual meeting held January 4, 1883, the following officers of the Society for the current year were elected:

*President.*—Albert L. Gihon, M.D.

*Vice-President.*—John M. Browne, M.D.

*Secretary.*—James M. Flint, M.D.

*Business Committee.*—Thomas J. Turner, M.D., Adolph A. Hoehling, M.D., Thomas H. Streets, M.D.

**THE AMERICAN JOURNAL OF OTOTOLOGY.**—The suspension of this publication is announced.

**A CÆSAREAN OPERATION PERFORMED BY A PRIEST.**—M. BLOMME, according to the *Lyon Med.*, January 28th, the *curé* of St. Amand, Belgium, was called to one of his lady parishioners who seemed on the point of death and was far advanced in pregnancy. Seeing that the woman was lost, and having in vain sought for a medical practitioner or midwife, he resolved to remove the fœtus himself, and succeeded in extracting twins—the subject of the operation having in the meantime died. He was proceeded against for illegal practice of medicine, but the case was dismissed, and an appeal being made to the Tribunal at Ghent, it confirmed the acquittal of the accused, on the ground that what he had done did not come under the operation of any penal law. The Procureur-Général of the Ghent Appeal Court gave notice that he should take the case into the Cour de Cassation.—*Med. Times and Gazette*, February 3, 1883.

**COMPULSORY VACCINATION IN GERMANY.**—DR. ROBERT KOCH has expressed himself strongly in favor of the present movement in Germany, which proposes compulsory vaccination. He thinks the dangers of transmitting syphilis and scrofula are almost infinitesimal.

**STATUE TO DARWIN IN FRANCE.**—Acting on the proposition of M. de Quatrefages, the Academy of Sciences of France have authorized the opening of a subscription for the erection of a monument in honor of the memory of Charles Darwin.

**AN ARMY MEDICAL BOARD** has been ordered to assemble at the Army building, corner of Houston and Greene Streets, New York City, New York, March 1, 1883, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the Medical Corps of the Army, and will probably continue in session about three months.

All candidates for appointment in the Medical Corps must apply to the Secretary of War for an invitation to appear for examination. The application must be in the handwriting of the applicant, must state date and place of his birth and place and State of which he is a permanent resident, and must be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character, and moral habits. Testimonials as to professional standing from professors of the medical college at which they graduated, should also accompany the application if they can be obtained. The candidate must be between twenty-one and twenty-eight years of age (without any

exceptions), and a graduate of a regular medical college, evidence of which—his diploma—must be submitted to the Board.

Further information regarding these examinations and the nature thereof, can be obtained by addressing the Surgeon-General, U. S. Army, Washington, D. C.

**NATIONAL BOARD OF HEALTH.**—At a meeting of the Michigan State Board of Health, at Pontiac, Michigan, February 1, 1883, the following resolutions relative to the National Board of Health were adopted:

*Whereas*, The work of the National Board of Health has been seriously crippled by reducing its appropriation and by transferring to another branch of the government service important parts of its legitimate work and means of usefulness,

*Resolved*, That in our opinion, no other government service is so well qualified to perform the health service of the United States as is the National Board of Health, which has shown by its works its ability to do what was assigned to it, and to gain and retain the confidence of sanitarians throughout this country.

*Resolved*, That we consider it of the highest National importance, as also of great importance to this State, that the National Board of Health shall receive annually an appropriation sufficient to enable it to carry on the important work of protecting the country from the introduction of contagious diseases; of collecting and distributing, for the guidance of State and local boards of health, information relative to the prevalence of diseases, and particularly of contagious diseases; of investigating by specially qualified experts the obscure causes of diseases; and of publishing to the world the results of its studies and investigations, more especially concerning diseases which, like diphtheria and smallpox, spread generally throughout the country.

*Resolved*, That a copy of this preamble and resolutions be forwarded to each member of Congress from this State.

The Illinois State Board of Health furnishes the following memorandum of the work performed by the National Board as an argument for its continuation: The National Board of Health has demonstrated the value and efficiency of the national authority in the protection of the public health. By initiating a reform in the principles and practice of maritime quarantine, which, so far as it has been carried out, has resulted in securing the largest measure of protection against the importation of foreign pestilence on the one hand, whilst, on the other, it relieves commerce from the arbitrary, and often dangerous, detentions, with their consequent costly charges and exorbitant fees, which obtain under the old system, still largely in vogue.

By its service of sanitary inspection and supervision of immigrants and of inland transportation by river and rail, whereby the introduction and spread of smallpox and yellow fever have been effectually controlled; the barbarities of the "shot-gun quarantine" abolished; and commercial confidence, business interests, and travel and traffic protected against needless interruptions and loss through panic and unfounded alarm.

By its researches and investigations into the cause of yellow fever, diphtheria, malarial, and other diseases; into the adulterations of food and drugs; into the sources of, and remedies for air, soil, and water pollution; and into many other problems of sanitary science and preventive medicine, the results of which are already utilized by sanitary engineers, legislators, medical teachers, physicians, and others in promoting human comfort and well-being, in preventing disease and in saving life.

By demonstrating the feasibility of so dealing with

an infected locality—by temporary depopulation, isolation, and sanitary supervision of its relations with exposed communities—as to secure the prevention of spread of the infection; the limitation of its ravages to the fewest number of victims within the locality itself; and the minimum of disturbance to the interests of threatened regions.

By its relations to State and local boards of health, through which have been secured coöperation and uniformity of action, without regard to State and local boundaries or jurisdiction, to the great advantage of common carriers and other agents of commerce, and to the more efficient protection of the public health; and through which, also, State and local boards have been relieved, *pro tanto*, from the necessity and expense of guarding against the invasion of disease from without—a necessity for which such boards, unaided, have neither adequate authority or means.

WHAT IS SAID OF THE NEW YORK CODE.—“The net result is to impress the mind with a sense of the predominance of the commercial over the professional or scientific elements of the practice and pursuit of medicine.—*Boston Medical and Surgical Journal*.

“The disaster at Albany is due to a cause which has carried many ignoble measures in our State and municipal affairs, viz., a reluctance on the part of our ablest scientific men, who otherwise mould professional sentiment, to engage in heated controversial discussions. The meeting at Albany was not representative. The leaders of medical opinion and the acknowledged scientific authorities in New York should have been in person at Albany. The one hundred and two who protested in writing should have protested by so many votes.—*Louisville Medical News*.

“We sincerely trust that the action taken may prove to be wise, and that its effect may not in the long run act as a bar to the affiliation of our State Society with those bodies that formerly worked in harmony with it.—*New York Medical Journal*.

“The matter can now be safely left where it is. We may be permitted to say, however, in the greatest courtesy, that the present action of the Society conclusively shows that New York State is determined to take care of its own ethical affairs, and resents meddlesome interference from outside influences.”—*The Medical Record*.

WHAT THE NEW YORK CODE WILL LEAD TO.—*The Maryland Medical Journal* for February 15th, concludes an editorial on this subject, as follows: “As for those members of the New York profession who still show allegiance to the National Association, but one course seems open to them, and that is to withdraw from the seceding body and organize a new society, which would join with the other State societies in upholding the principles which alone can maintain the honor and respectability of our profession in their complete integrity.”

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 10, 1883, indicate that diarrhoea, scarlet fever, and diphtheria have increased, and that neuralgia has decreased in area of prevalence.

Including reports by regular observers and others diphtheria and scarlet fever were each reported present during the week ending February 10th, and since, at 19 places, and measles at 16 places. Smallpox at St. Joseph, Berrien County, was reported as having ceased February 10th.

OBITUARY.—DR. HENRY C. SIMMS, died at Brooklyn, on February 13th, aged 50 years.

He was a native of Washington, D. C., a graduate

of Jefferson Medical College in 1855, and had been twenty-five years in practice in Brooklyn. He was elected coroner in 1874, and again in 1877, but on running for a third term in 1880 was defeated; he was one of the very few physicians of education who have been chosen to that responsible position in that city, and made one of the best coroners who have filled the office. His death took place suddenly by heart disease; an autopsy revealed partial occlusion of the coronary artery.

—Died at Philadelphia, on February 15, 1883, DR. BENJAMIN HOWARD RAND.

Prof. Rand was born in Philadelphia in 1827. He graduated from the Jefferson Medical College in 1848, and two years later was elected Professor of Chemistry of the Franklin Institute. From 1852 to 1864 he was Secretary of the Academy of Natural Sciences. He accepted the Chair of Chemistry in Jefferson Medical College in 1864, from which ill-health forced him to retire in 1877. He was elected a Fellow of the Philadelphia College of Physicians in 1853 and a member of the American Philosophical Society in 1868, and was also a member of the American Medical Association. He was the author of several elementary works on chemistry.

—Died on January 25th, CHARLES ÉMANUEL SÉDILLOT, in the eightieth year of his age.

Prof. Sédillot was born in Paris in 1804, where he received his medical education, graduating in 1825; in 1836 he was made Surgeon-major in the army and served in the African campaign. In 1839 he was appointed to the Chair of Clinical Surgery in Strasbourg. His contributions to operative surgery were numerous and important. He introduced several important modifications into the methods of performing amputations and resections: he was also the author of an important work on luxations. He was one of the first French surgeons to use ether as an anæsthetic, and his essay on the retention of the periosteum as a means of preserving the value of limbs was crowned by the Surgical Institute in 1867.

#### OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 12 TO FEBRUARY 19, 1883.

BROWN, JOS. B., *Lieutenant-Colonel and Surgeon*.—Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the Medical Corps, U. S. Army, to convene at New York City, on March 1, 1883.—*Par. 1, S. O. 35, A. G. O., February 10, 1883*.

CLEMENTS, BENNETT A., *Major and Surgeon*.—Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the Medical Corps, U. S. Army, to convene at New York City, on March 1, 1883.—*Par. 1, S. O. 35, A. G. O., February 10, 1883*.

JANEWAY, JOHN H., *Major and Surgeon*.—Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the Medical Corps, U. S. Army, to convene at New York City, on March 1, 1883.—*Par. 1, S. O. 35, A. G. O., February 10, 1883*.

CLEARY PETER J. A., *Captain and Assistant Surgeon*.—Granted leave of absence for four months on account of sickness, to take effect January 3, 1883, in extension of his authorized absence on certificates of disability.—*Par. 6, S. O., No. 40, A. G. O. February 16, 1883*.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.